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ABSTRACT

The report consists of three parts: "The Design of a Federal Employment Program to Counter Recession"; "The Design of a Federal Employment Program in a Strategy to Raise Low Earnings"; and "The Design of a Guaranteed Job Opportunity as a Part of Welfare Reform". In Part 1, an Anti-Recession Program (ARP) is proposed. ARP is an automatically triggered Federal employment program that builds on the current Public Employment Program, but tries to correct its weaknesses. In Part 2, a two-pronged strategy to raise low earnings is proposed, consisting of an increase and extension of the Federal minimum wage, and job creation induced by a Federal employment program. An Employment Incentive Program (EIP) is proposed with reservations. Finally, in Part 3 the obstacles to implementing a guaranteed job opportunity are analyzed. (Author)

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The Design of Federal Employment Programs: An Economic Analysis

By

Laurence S. Seidman

A.B. (Harvard University) 1968

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THE DESIGN OF FEDERAL EMPLOYMENT PROGRAMS:
AN ECONOMIC ANALYSIS

ABSTRACT

Laurence S. Seidman

In recent years, Federal employment programs have been proposed for three distinct purposes. First, they have been offered to counter recession; second, to raise the earnings of disadvantaged and low-skilled workers; and third, to replace welfare for household heads who are able to work. The starting point for this dissertation is that each of these three objectives must be analyzed separately, in order to determine what kind of a Federal employment program - if any - is appropriately designed to help achieve the objective. Consequently, the dissertation consists of three parts: "The Design of a Federal Employment Program to Counter Recession," "The Design of a Federal Employment Program in a Strategy to Raise Low Earnings," and "The Design of a Federal Employment Program as a Part of Welfare Reform." Each part will now be summarized in turn.

"The Design of a Federal Employment Program to Counter Recession" begins with the assertion that a new stabilization instrument is needed to perform a limited, but important, task. While recession should ultimately be countered by standard fiscal and monetary policy (as well as forces within the private economy), what is needed is an instrument that can quickly provide a short-term holding action when the downswing begins. The alternative instruments are compared with an automatic Federal employment program. The Federal employment program is shown to be the most effective instrument for providing this holding action.

An automatic Federal employment program, called the Anti-Recession Program (ARP) is proposed. It builds on the current Public Employment Program, but corrects its main weaknesses.

Like PEP, ARP provides Federal grants to state and local governments to counter recession. Unlike PEP, ARP contains the following features. First, it has a genuine trigger that automatically obligates funds whenever the national unemployment rises above the trigger unemployment rate, without requiring either authorization or appropriations by Congress. All discretionary delays are therefore removed. Second, the level of funding varies automatically with the level of unemployment. Funding is changed quarterly, instead of annually, to keep pace with the downswing. Third, the level of funding is made large enough to maintain unemployment near the trigger rate in spite of the fall in aggregate demand. The features of ARP are examined in detail, and it is shown that during the 1970 recession, ARP could have held the unemployment rate below 5.0% at an annual net cost (including savings in unemployment compensation, and increased taxes) of about $1 billion.

"The Design of a Federal Employment Program in a Strategy to Raise Low Earnings" begins with the fact that low earnings are caused by employment at a low wage, as much as by unemployment. In 1970, a fifth of all officially poor household heads - two fifths of all poor heads who worked at all that year - worked year-round (50-52 weeks), full-time, and yet were still poor. A two-pronged strategy is therefore proposed. It consists of raising and extending the Federal minimum wage to a relatively high level (roughly $2.40 for the year 1973), and then offsetting the unemployment effect of such a minimum wage by inducing the creation of additional above-minimum wage jobs through a Federal employment program. It is shown that such a strategy compares well with alternative anti-poverty approaches, provided the Federal employment program proves feasible. The analysis concentrates on the feasibility of such a program.

The aim of the employment program is to induce regular employers, public and/or private, to hire more non-supervisory employees than they otherwise would, for a given level of demand and therefore, inflationary pressure. This can be accomplished by a subsidy which lowers the wage paid by employers.

Any attempt to induce independent agents to do more of what they are already doing must cope with the fundamental problem of maintenance of effort. What is to prevent employers from simply using Federal subsidies to pay for persons who would have been employed anyway? Other issues that must be addressed are closed vs. open-ended grants, substitution and lay-off bias among employees, private vs. public sector, direct vs. indirect supervision, and subsidizing work vs. training. Current programs are compared, and an alternative, called the Employment Incentive Program (EIP) is proposed, with reservations. EIP should solve most of these problems, but its ability to handle the maintenance of effort problem, with its new maintenance of effort index, must be tested in further research, and actual experimentation.

"The Design of a Guaranteed Job Opportunity as a Part of Welfare Reform" examines the problems that must be solved before "workfare" can be substituted for welfare. Since concern for inflation prevents the expansion of demand to achieve this objective, any guarantee proposal must first show why it, too, will not exacerbate inflation. It is argued that the guarantee should rely primarily on regular jobs with public and private employers, rather than on special projects or restricted jobs with public employers. The latter should be limited to truly last resort employment, because of their inevitably lower value to the persons employed, and to society. Current programs and prominent alternatives are analyzed. It is shown that the problems described in both Parts I and II will plague the guarantee, and that both the Anti-Recession Program and the Employment Incentive Program should therefore be the main instruments for achieving the guarantee. Since the guarantee depends on EIP, it too must be proposed with reservations.

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R. A. Gordon

Dissertation Committee Chairman

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INTRODUCTION

In the summer of 1971, Congress passed tne Emergency Employment Act, authorizing the Public Employment Program. For the first time since the New Deal, the Federal government initiated a major program of direct job creation. The Public Employment Program tried to combine two goals. Its first was to counter the recession that had begun in the previous year, and had lifted the national unemployment rate above 6%. Its second was to provide job opportunities for disadvantaged persons. Thus, the Emergency Employment Act expressed the view that the Federal government could design a job creation program to counter recession, and to assist those with low skills. As this is written, in April 1974, it is uncertain whether the Public Employment Program will be phased out, continued, or expanded (its recent history will be described shortly).

While the Emergency Employment Act restricted Federal grants to public agents - state and local governments - the Federal government had in recent years tried to induce the creation of jobs for the disadvantaged in the private sector through two programs. In the last years of the Johnson Administration, Job Opportunities in the Business Sector (JOBS) was launched. Under JOBS, the Department of Labor would negotiate contracts with businesses to train, on the job, and employ, disadvantaged persons. While JOBS was partially a manpower training program, it was also a job creation program. The Federal government attempted to induce the creation of private sector jobs for disadvantaged persons.

The second job creation effort aimed at private employers was the WIN tax credit, authorized by the Revenue Act of 1971. Private employers were offered a tax credit equal to 20% of the wage for employing welfare recipients who received training in the Work Incentive Program (WIN). The tax credit was in effect a Federal grant aimed at inducing private employers to offer

jobs to a particular disadvantaged group.

While these two objectives - countering recession and assisting the disadvantaged - were fostering a set of employment programs, still a third objective spurred proposals for Federal job creation. After reviewing President Nixon's welfare reform proposal, the Family Assistance Plan, for over a year, the Senate Finance Committee rejected the plan, and in the spring of 1972 instead offered an alternative. The title of its proposal was, "A Guaranteed Job Opportunity." The Committee asserted that the Federal government should guarantee a job opportunity to all eligible heads of households, and this guarantee should replace welfare for heads who were able to work. In the end, Congress approved none of the plans before it, and the current system continued. But efforts may be expected in the future to substitute an employment opportunity for welfare, for able bodied household heads.

Thus, at least three distinct objectives have encouraged the design of Federal employment programs in recent years: to counter recession, to raise low earnings, and to guarantee a job opportunity as a part of welfare reform. The purpose of this study is to analyze the role of Federal employment programs in pursuing each of these objectives.

Each objective must be treated separately. A program that is well designed for one objective may be poorly designed for another. Politically, it may be useful to combine more than one goal, and program, into a single Act, as was done with the Public Employment Program. Analytically, it is essential that each goal be examined one at a time. The aim will then be to determine, for the goal at hand, what are the fundamental problems that must be overcome. What are the advantages and disadvantages of alternative designs?

The analysis will primarily be <u>economic</u> analysis. It will focus on the economics of the design of Federal employment programs. This by no means implies that other aspects are unimportant. A division of labor is needed. For example, eligibility criteria for the guaranteed job opportunity is a subject unto

itself. The specific institutional and adminstrative procedures implied by each design require full treatment. Here, the analysis will focus on whether the design for each objective is economically sound. What is the economic efficiency of the approach? What is its effect on inflation? Why is a shift in relative factor prices important? How should economic agents be expected to respond to the incentives incorporated in the design?

The focus on economic aspects does not mean that administrative and practical implications will be ignored. Far from it. Economic analysis is profoundly concerned with whether incentives really work, whether production and employment are actually called forth in practice.

This study will consist of three parts. The first is, "The Design of a Federal Employment Program to Counter Recession." The second is, "The Design of a Federal Employment Program in a Strategy to Raise Low Earnings." The third is, "The Design of a Guaranteed Job Opportunity as a Part of Welfare Reform."

In "The Design of a Federal Employment Program to Counter Recession," the adequacy of current policy instruments is questioned. It is agreed that standard fiscal and monetary policy are the proper means for eventually countering a fall in aggregate demand. Yet these policy instruments almost invariably do not act rapidly enough to prevent recession from occurring. The Public Employment Program was passed by Congress, and signed by the President, after the national unemployment rate had already reached 6%, largely because it was regarded as the fastest way to counter the high level of unemployment. What is needed is a policy instrument that can perform a holding action, sustaining employment until the private economy and/or standard fiscal and monetary policy restore aggregate demand to a sufficient level.

The current Public Employment Program takes a first step towards providing this holding action. But its design has several weaknesses. The analysis in Part I will examine the shortcomings of all current instruments for responding rapidly to recession. In light of this analysis, an Anti-Recession Program

will be proposed that builds on the current Public Employment Program, but should correct its weaknesses. The design of this proposed program will be carefully evaluated, and the performance of such a program during the most recent recession will be analyzed.

In "The Design of a Federal Employment Program in a Strategy to Raise Low Earnings," the analysis begins with the fact that the data show that low earnings are caused by employment at a low wage, as much as by unemployment. In 1970, a fifth of all officially poor household heads - 40% of all poor heads who worked at all in 1970 - worked year-round (50-52 weeks), full-time, and yet were still poor. Thus, the proper objective is not simply to reduce unemployment among the low-skilled, though this is certainly important. The proper objective, more broadly defined, is to raise low earnings, by raising the wages of those already employed full-time, as well as by reducing unemployment.

A two-pronged strategy to raise low earnings is proposed. It consists of raising the Federal minimum wage to a relatively high level (roughly $2.40 for the year 1973, instead of the actual $1.60 minimum in 1973, or the $2.30 minimum in 1976 recently signed by the President), and extending its coverage to nearly all workers; and then offsetting the unemployment effect of such a policy by creating additional above-minimum wage jobs through a Federal employment program.

Whether this strategy is feasible depends on the practical solution to a set of fundamental problems in the design of the Federal employment program. These issues include the maintenance of effort problem, closed vs. open-ended grants, substitution and lay-off bias among employees, private vs. public sector, direct vs. indirect supervision, subsidizing work vs. training, and the effect on inflation. After evaluating current proposals and programs, an alternative - the Employment Incentive Program (EIP) - is proposed with reservations. The feasibility of EIP, and for that matter, any other employment program with this objective, will be shown to depend on whether a practical maintenance of effort index can be devised.

It should also be stressed that if such a maintenance of effort index, and therefore the Federal employment program, proves unfeasible, then the high minimum wage strategy is itself questionable. A high and extensive minimum wage makes sense only if its unemployment effect can be offset by a Federal employment program.

In "The Design of a Guaranteed Job Opportunity as a Part of Welfare Reform," the focus is on feasibility. The guarantee has long been a popular ideal, but the ability to achieve it has been widely doubted. The need to provide an actual guarantee has arisen with new urgency in the context of welfare reform. The reason is simple. Without a guarantee, it is impossible to distinguish between those household heads who want a job but cannot find one, and those who say they cannot find a job but really do not want one, preferring welfare.

Any attempt to offer a guarantee must do so without generating unacceptable inflationary pressure. The inflation constraint, and its implications for the design of a guarantee, are analyzed. There are several experiments now attempting to convert welfare to "workfare" and there are several proposals describing the design of a guarantee. Almost all of these envision the main burden being borne by special work projects. In this analysis, it is argued instead that economic and administrative efficiency, and the economic welfare of those who become employed, call for the main burden to be carried by regular producers, private and public, and that special work projects should have a limited, truly last resort role.

Current experiments and proposals for a guarantee are analyzed. They are found to have serious difficulties. As in Part II, an alternative design is proposed, with reservations. In fact, the reservations are identical to those in Part II, since it is proposed that the Employment Incentive Program (EIP), which was set forth in Part II, be the central instrument for implementing the guarantee. The feasibility of this approach, or any other guarantee effort, rests on the ability to devise a workable maintenance of effort index.

PART I

THE DESIGN OF A FEDERAL EMPLOYMENT PROGRAM TO COUNTER RECESSION

Chapter 1

A COMPARISON OF ALTERNATIVE INSTRUMENTS FOR COUNTERING RECESSION

Before analyzing the design of an automatic Federal Employment Program, the justification for such a policy instrument must be set out. There is broad agreement that standard fiscal and monetary policy - the level of tax rates, government spending, and the money supply - are the appropriate instruments for eventually restoring aggregate demand, thus countering recession. Yet it is also agreed that these instruments do not operate rapidly enough to prevent an initial burst of unemployment, which then lasts a significant period of time.

It will be argued in this section that what is needed is a policy instrument that can engage in a short-term holding action, until the standard tools of macroeconomic policy, as well as forces in the private economy, can come into play, and ultimately overcome the recession. Thus, the assertion in this section is not that a new instrument should replace standard fiscal and monetary policy; but rather, that a new automatic instrument is needed to provide the short-term holding action. That instrument is an automatic Federal Employment Program, and the burden of this section is to compare it to standard instruments, and alternative instruments, and to justify its use for the limited objective of providing a short-term holding action in a period of rising unemployment.

A. POLITICAL OBSTACLES TO THE EFFECTIVE USE OF TAX RATES

Ideally, tax rates, rather than government spending, should be used for stabilization. In his well known approach to the functions of the public sector, Musgrave lists allocation, dis-

tribution, and stabilization. He argues that government spending should be determined by the allocation and distribution functions. Under the assumption that resources will be fully employed, government spending should be set to achieve the proper allocation between public and private sectors, and the desired distribution of income through transfer payments. Then full employment should be achieved by appropriately setting tax rates. He argues as follows:

> Now take the relationship between considerations of allocation and stabilization. In times of unemployment when expansion of aggregate demand is needed, an increase in government expenditure is often proposed as a remedy. Similarly, at times of inflation, when demand is to be restricted, a case is made for a reduction in such expenditure.
>
> While it is proper for social goods to share in a general expansion or restriction of expenditures, there is no reason why they should account for the entire or major part of the change. As we have seen, the stabilizing adjustment can also be made through increase or reduction in taxes, or reduction or increase in transfers, while leaving the provision for social goods (appropriate at full employment levels) unaffected.
>
> Mixing the issues leads to an oversupply of social goods or to wasteful public expenditures when expansion is needed; and to a correspondingly wasteful undersupply when restriction is called for.[1]

Walter Heller, Chairman of the Council of Economic Advisors under Kennedy, echoes the same view:

> . . . the principles of efficient resource allocation and management call for the development of government programs to accord with basic citizen preferences as between public and private sectors, rather than their use as stop and go instruments of stabilization policy.[2]

---

1. Musgrave and Musgrave [25], p. 20.

2. Heller [18], p. 96.

Yet in spite of their theoretical advantage, tax rates have proved highly inflexible in practice. The Kennedy Administration came into power, committed to reducing unemployment and fostering economic growth. Yet even when the President became convinced that a major stimulus was needed, a proposal for a tax cut was carefully weighed for a considerable period. Once it was actually proposed, considerable time passed before the proposal was finally enacted in 1964.[3]

If these delays were caused primarily by lack of understanding of economics, then optimism might be warranted. As Congress learned more about economics, it would speed up the process, and enact quick tax cuts when a major stimulus was needed. Unfortunately, the cause of the delay lies elsewhere.

First, there was lack of agreement within the Administration over how to stimulate the economy. Galbraith, among others, argued for increased public expenditure, instead of a tax cut. For those who believed that too few resources were allocated to the public sector, here was a chance to combine improved allocation with stabilization. The President had to weigh, not simply the merits of the two approaches, but the political support each would generate. The Administration recognized that, on the one hand, the AFL-CIO favored government spending, while on the other hand, business preferred the tax cut.

Second, a major piece of tax legislation could not be rushed through Congress. Constituents are concerned about tax rates. Every taxpayer is affected by such changes. For a sizable number, setting tax rates is the most important task Congress performs. Every Congressman and Senator knows he will be held accountable for tax rate changes. Thus, a major tax rate change is inevitably weighed carefully.

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3. Heller [18], p. 34.

Third, any piece of major legislation will tend to be delayed because political support must always be bargained for. Legislators who seek support for their own high priority projects will hold out, promising their support only in return for support for their own priority. Even if there were broad support for a tax rate change, such bargaining would almost always delay passage.

Because of these fundamental problems of discretionary tax rate changes, many economists have proposed new procedures for rapid tax changes. Presidents Kennedy, Johnson, and Nixon have all made such proposals - thus far without any success. Heller writes:

> Most important, we need to develop streamlined procedures that can deliver tax changes in a hurry. We need to press the search for shortcuts that are consistent with the congressional prerogative in revenue matters. President Kennedy in 1962 asked for standby Presidential authority, subject to Congressional veto, to make quick temporary cuts - up to 5 percentage points - in the individual income tax to fight recession. His request was coldly received by a Congress jealous of its fiscal powers. President Johnson's far milder proposal in 1965 urging Congress to insure that its procedures will permit rapid action on temporary income tax cuts if recession threatens, did not elicit much response from a Congress otherwise occupied.[4]

Arthur Okun, a Chairman of the Council of Economic Advisors under Johnson, gives a similar evaluation:

> A decade ago, the bipartisan and distinguished Commission on Money and Credit displayed prophetic vision when it recommended that the Congress delegate to the President discretionary authority to raise and lower tax rates within specified amounts, in specified ways, subject to congressional veto. A similar proposal - limited to

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4. Heller [18], p. 101.

> tax reduction - was endorsed by President Kennedy in January 1962, but not a single congressman was sufficiently impressed to introduce it as a piece of legislation . . . Congress appropriately treasures its constitutional prerogatives to alter our tax legislation. Given the repeated display of intense opposition to the delegation of authority, I am not optimistic about the near-term prospects for such a reform. But I believe that the active expression of informed opinion in favor of a delegation of authority to the president to vary tax rates is likely to improve congressional performance on fiscal policy.[5]

Finally, President Nixon's Council of Economic Advisors include the following passage in the 1973 Economic Report of the President:

> We also need to consider whether the future conduct of fiscal policy could be improved if Congress were to develop expeditious precedures for temporary, limited changes in the level of particular taxes. Such changes could take the form of a temporary, 1-year, positive or negative surcharge rate on personal and corporate income taxes, or additionally, a temporary, 1-year shift in the rate of the investment tax credit. Both suggestions have been advanced with some regularity over the past two decades, and while they raise many difficult questions it is also generally agreed that we cannot be complacent about our existing instruments for the conduct of fiscal policy.[6]

The political opposition to automatic, or even semi-automatic tax rate changes, is not likely to wane. It does not rest on lack of understanding of economics. Thus, it is not a matter of education. Instead, its foundations are political, and are unlikely to alter. Economically, it is possible to separate allocation, distribution, and stabilization; politically, it is almost impossible. As long as voters are concerned about their taxes, it is hard to

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5. Okun [31], p. 118-119

6. U.S. President [52], 1973, p. 75-76.

imagine Congress delegating authority or changing rates rapidly.

This does not mean that new procedures will never be approved, or that effort should not continue to achieve such reforms. The point is that alternative policy instruments must be considered. It is unrealistic to insist that tax rates are the proper instrument, if it is unlikely that political obstacles to their use will be overcome. If it turns out that Congress might be more willing to approve rapid expenditure changes than rapid tax changes, then this should become an important element in policy design. Shortly, it will be argued that this is most likely the case.

B. REGIONAL CYCLICAL VARIATION AND TAX RATES

Even if the rapid change of tax rates were politically feasible, they are subject to an important constraint that does not apply to Federal expenditures. This constraint may be called the uniformity rule. Article I, Section 8 of the Constitution requires that, "...all Duties, Imposts, and Excises shall be uniform throughout the U.S." At the time the Constitution was written, direct taxes such as the income tax were not envisioned. The 16th Amendment, passed in 1913, empowered a national income tax. Musgrave writes:

> While the Constitution relates the uniformity rule to "duties, imposts, and excises," thereby excluding "direct taxes," this was not meant to invite the use of "direct taxes" for regulatory purposes on a regionally differentiated basis. Indeed, the framers of the Constitution did not visualize federal use of direct taxes, which at that time were thought of primarily in terms of the property tax. Nor is it likely that the courts would permit a regionally differentiated use of the income taxes under the 16th Amendment.[7]

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7. Musgrave and Musgrave [25], p. 30.

Even if the courts did allow it, there is little likelihood that such variation would be politically feasible. It is hard to imagine congressmen and senators explaining to their constituents why their income tax rates are higher than those that apply in another state. Even persons who understand the economic logic of such variation would probably question its equity. Surely the many who do not understand its economic logic will have little difficulty detecting its inequity.

In contrast, there are no such constitutional constraints on Federal spending. Musgrave writes, "Neither the uniformity rule nor the apportionment rule applies to the expenditure side of the federal budget."[8]

Politically, there is far greater flexibility on the expenditure side than on the tax side. Most federal expenditure programs do not allocate funds uniformly among all regions. Some programs favor particular regions, or areas. Political support for these is achieved by promising support for programs that will favor other areas. Thus, support for farm legislation is often exchanged for support for legislation aimed at urban areas. Congressmen and senators watch out for their area's interest, and this does limit the degree to which Federal expenditures, as a whole, can vary among areas. But the point is that there is flexibility.

This flexibility is possible because constituents are less directly affected by Federal expenditures than they are by personal tax rates. If personal tax rates are varied, an important bloc of voters takes notice. While voters take some notice of their district's share of Federal aid, pressure is unlikely on any one Federal program. It is well accepted that Federal programs can allocate funds non-uniformly, as long as each area is

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8. Musgrave and Musgrave [25], p. 29.

treated fairly according to the specific purpose of the program. Thus, when the Public Employment Program, authorized by the Emergency Employment Act of 1971, allocated funds to areas in proportion to the severity of unemployment, there was little opposition to this formula. Yet it resulted in a variance in spending among areas. On the other hand, had this program excluded many areas from aid, while concentrating funds in only a fraction of areas, political opposition would have emerged.

Because there is flexibility on the expenditure, but not on the revenue side of the federal budget, Musgrave qualifies his support for using tax rates for stabilization:

> This argument has much merit in principle, but needs to be qualified in practice. The cyclical sensitivity of various industries differs and the level of unemployment varies regionally. Use of expenditure policy may be desirable because it can be focused locally where unemployment exists, rather than diffused nationally as is the case with tax reduction.[9]

How important are these regional differences in cyclical fluctuation? In his "Regional Aspects of Stabilization Policy" Stanley Engerman concludes:

> Cyclical fluctuations in the U.S. during the postwar years have been nationwide, with small differences in turning points between regions (here defined as states), but the magnitude of the movements within these fluctuations has differed considerably among regions.[10]

Engerman presents data showing how the decline in employment during three downturns was concentrated in the fourteen "manufacturing belt," states. Table 1 shows that these states suffered a greater share of the decline than their share of employment.

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9. Musgrave and Musgrave [25], p. 554.

10. Engerman [9], p. 29.

Table 1

PROPORTIONS OF EMPLOYMENT AND EMPLOYMENT DECLINES
IN THE FOURTEEN "MANUFACTURING BELT" STATES
IN THREE RECESSIONS, 1949, 1954, and 1958

(In percent)

	Percentage of	
	National Employment (Peak Year)	Decline in National Employment
1949		
Total	55.5	73.2
Manufacturing	66.8	74.6
Durable Goods	72.5	75.9
1954		
Total	53.9	75.9
Manufacturing	65.0	81.5
Durable Goods	70.4	82.6
1958		
Total	52.2	81.8
Manufacturing	62.7	84.3
Durable Goods	67.8	88.2

Source: Engerman, Stanley, "Regional Aspects of Stabilization Policy," in Richard Musgrave, Editor, Essays in Fiscal Federalism, (1965), Washington, D.C., Brookings Institution, p. 15.

Data from the most recent recession in 1970-71 further illustrates the variation among states. The data are derived from the state unemployment insurance systems. Table 2 summarizes the data. Each cell shows the number of states in which the 1969-70 rise in the unemployment rate is the amount given in the column, and the 1970-71 rise in the unemployment rate is the amount given in the row. For example, in seven of the states, the unemployment rate rose between 0.5%-0.9% in both 1969-70 and 1970-71. In only one state did unemployment rise between 0.5%-0.9% in 1969-70, and rise over 1.5% in 1970-71. The sum of all states is of course fifty.

If all states were affected identically by the recession, then all 50 would be concentrated in a single cell, and all other cells would have 0. This is far from the case. No cell has over seven states. Most cells have a number greater than zero. It is true that in only three states did the unemployment rate decrease in either 1969-70 or 1970-71. But while the recession increased unemployment in nearly all states, the magnitudes of the increases varied considerably. Consider, for example, the contrast between the four states where the unemployment rate rose more than 1.5% in both 1969-70 and 1970-71, and the one state in which the rate increased only 0.0%-0.4% in both periods. Clearly a policy instrument that does not take into account these differences will be highly inefficient in treating the effects of recession.

Because of the regional variation in cyclical fluctuation, and the variation in still smaller geographical areas, a policy instrument is needed that can vary the stimulus according to the rise in unemployment in the designated area. Government spending, unlike tax rates, has the constitutional and political flexibility to achieve this.

C. DISCRETIONARY VS. AUTOMATIC EXPENDITURE: THE MODEL OF UNEMPLOYMENT COMPENSATION

Although it may be conceded that government spending has certain advantages over tax rates, the desirability of an auto-

Table 2

VARIATION IN THE IMPACT OF RECESSION AMONG STATES*

		Increase in the Unemployment Rate from 1970 to 1971				
		Decrease	0.0%-0.4%	0.5%-0.9%	1.0%-1.4%	1.5%+
Increase in Unemployment Rate from 1969 to 1970	Decrease	0	0	0	1	0
	0.0%-0.4%	1	1	1	0	0
	0.5%-0.9%	0	7	7	1	1
	1.0%-1.4%	1	6	5	7	2
	1.5%+	0	1	3	1	4

* Each cell contains the number of states in which the unemployment rate changed by the designated amounts in 1969-70 and 1970-71.

Source: Derived from data in U.S. Manpower Administration, Manpower Report of the President, (1973), Table D-4, p. 206.

matic program is a separate issue. The argument for an automatic program is that discretionary action will inevitably lag seriously behind actual changes in unemployment. This is because unemployment changes quite rapidly, and because the same delays in the political process that hinder quick tax rate changes will also plague discretionary expenditure changes.

It is important to realize how quickly unemployment rises in a downswing. Data from the last three downswings illustrate this. All data are seasonally adjusted. Between August and November 1957, a one quarter period, the unemployment rate rose from 4.3% to 4.9%, an increase in unemployment of 181,000. The next five months are presented in Table 3a.

Seasonally adjusted unemployment jumped more than a million in a single month (between December and January). In a single quarter between December and March, unemployment increased almost two million.

The 1960 downswing was not quite as rapid, yet substantial increases occurred in a period considerably under one year. (Table 3b). In the quarter between September and December, unemployment increased three-quarters of a million.

The 1970 downswing was slightly slower than that of 1960, but again, unemployment rose substantially in a period considerably under one year. (Table 3c).

The rate of change of unemployment in these three most recent downswings means that the Federal expenditure program must respond rapidly. A program that, for example, changed its funding only once a year would be unable to prevent sharp and sustained rises in unemployment. Unemployment might jump to a relatively high level in a single quarter, and remain at that level for an additional three quarters before a once-a-year program could respond. Thus, any automatic program must change its funding more than once a year.

Why cannot a discretionary program be relied upon? The answer has already been given in the discussion of the weaknesses of discretionary tax rate changes. It is true that voters are

Table 3

THE RATE OF CHANGE OF UNEMPLOYMENT IN THREE DOWNSWINGS

(Seasonally adjusted)

	Unemployment Rate	Increase in Rate	Number Unemployed (in millions)	Increase in Number Unemployed
Table 3a				
Dec. 57	5.0		3.389	
Jan. 58	5.8	0.8	3.870	.481
Feb. 58	6.7	0.9	4.500	.630
Mar. 58	7.0	0.3	4.726	.226
Apr. 58	7.5	0.5	5.102	.376
Table 3b				
May 60	5.1		3.567	
June 60	5.4	0.3	3.842	.275
July 60	5.5	0.1	3.863	.021
Aug. 60	5.8	0.3	4.132	.269
Sep. 60	5.7	-0.1	4.037	-.095
Oct. 60	6.3	0.6	4.414	.377
Nov. 60	6.2	-0.1	4.389	-.025
Dec. 60	6.8	0.6	4.819	.430
Table 3c				
Jan. 70	3.9		3.206	
Feb. 70	4.2	0.3	3.435	.229
Mar. 70	4.4	0.2	3.637	.202
Apr. 70	4.7	0.3	3.861	.224
May 70	4.8	0.1	3.990	.129
June 70	4.8	0.0	3.976	-.014
July 70	5.0	0.2	4.173	.197
Aug. 70	5.1	0.1	4.255	.082
Sep. 70	5.4	0.3	4.497	.242
Oct. 70	5.5	0.1	4.588	.091
Nov. 70	5.8	0.3	4.869	.281
Dec. 70	6.1	0.3	5.058	.189

Source: U.S. President, Economic Reports of the President, Various years, Tables on Selected Unemployment Rates.

less sensitive to expenditure changes than they are to tax rate changes. This difference, however, does not outweigh the other similarities which will almost always delay action. First, there will be a recognition lag. An initial rise in the unemployment rate will not convince everyone that action is necessary. Forecasts will inevitably differ, and a significant segment of Congress will no doubt find support for the view that the rise in unemployment will be shortlived, and will correct itself without special action. Only when unemployment has continued to rise for several months is it likely that a strong consensus will develop in Congress that action is necessary.

Yet it will take still longer before there is a consensus on what kind of action. Some will propose a tax cut, opposing government spending as less productive than stimulating the private sector. Among those who support government spending, there will be differences over the kind of spending. Since legislators have their own favorite spending projects, they will try to foster such projects as a means of treating the recession. It will be difficult to separate stabilization from allocation and distribution.

Even if a consensus could develop over the kind of government expenditure that would be appropriate, lining up the votes for passage is bound to take time, because even legislators who know they will ultimately vote for the bill will tend to hold out, in order to bargain support for their favorite legislation. If unemployment has risen suddenly to depression levels, it may be hoped that these delays would be reduced. But the kind of steady rise in unemployment to recession levels, as occurred in the last three downswings, would probably not generate sufficient alarm in Congress to bring rapid action. In the 1970 recession, it was not until July, 1971, after unemployment had been roughly 6% for more than a half year, that Congress passed the Emergency Employment Act, which authorized grants to state and local governments to be used to hire persons to counter unemployment.

A contrast to discretionary action is the unemployment com-

pensation program. When unemployment begins to rise, no discretionary action is needed. As long as a state trust fund has reserves, funds can be automatically obligated to persons eligible for unemployment compensation. Thus, the political process imposes no delays. It is true that once reserves run out, as they often do in a sustained recession, Congressional action is necessary to supplement the unemployment compensation fund. The important point, however, is that unemployment compensation works automatically at the beginning of a downturn, when the chance of effective discretionary action is least. The following table (Table 4) shows the speed with which the unemployment compensation program responded to the 1970 recession.

Total benefits paid began rising along with the unemployment rate. In March of 1971, several months before Congress enacted the Emergency Employment Act, total monthly benefits were roughly five times as great as they were in September 1969. The data illustrate the advantage of an automatic program in countering recession.

The unemployment compensation program indicates that the public has long accepted an automatic expenditure program the purpose of which is to counter the effects of recession. While it is true that only funds raised by the trust funds can be spent, these funds can be obligated without any discretionary action, according to the rise in persons eligible.

An automatic Federal employment program would embody the same concept as the unemployment compensation program. Funds would be obligated without discretionary action. In response to a rise in the national unemployment rate, Federal funds would be pumped into state and local governments. The time-consuming political process would be circumvented.

In spite of this fundamental similarity, several differences between the automatic Federal employment program, and unemployment compensation, should be noted. First, under unemployment compensation, funds can only be obligated if they exist in the state trust fund. While this is not a constraint at the be-

Table 4

RESPONSE OF UNEMPLOYMENT COMPENSATION BENEFITS
TO THE 1970 RECESSION

	Unemployment Rate (seasonally adjusted)	Insured Unemployment (thousands)	Total Benefits Paid (millions)
Sep. 69	4.0	903	$ 148.3
Oct. 69	3.9	930	153.8
Nov. 69	3.4	1,106	147.7
Dec. 69	3.4	1,449	208.5
Jan. 70	3.9	1.958	321.4
Feb. 70	4.2	1,988	333.2
Mar. 70	4.4	1,917	357.2
Apr. 70	4.7	1,885	345.6
May 70	4.8	1,778	315.5
June 70	4.8	1,696	315.4
July 70	5.0	1,897	341.5
Aug. 70	5.1	1,855	341.6
Sep. 70	5.4	1,746	328.3
Oct. 70	5.5	1,889	332.9
Nov. 70	5.8	2,233	372.1
Dec. 70	6.1	2,632	501.4
Jan. 71	6.0	3,194	568.1
Feb. 71	5.9	3,216	599.3
Mar. 71	6.0	3,091	684.3

Source: U.S. President, Economic Report of the President, Various years, Tables on Unemployment Insurance Programs, Selected Data.

ginning of the downturn, it becomes operative if the recession is severe. While a similar trust fund could be established for an automatic Federal employment program, which would involve the same constraint, this is not recommended. The unemployment compensation system was established at a time when it was widely believed that balanced budgets were essential for sound finance. It is now well accepted that deficit financing is desirable in recession. There is no reason to constrain expenditures because sufficient revenues were not raised in the past. Spending under an automatic Federal employment program would not be unlimited, but would be proportional to the rise in unemployment. The amount of funds obligated would be no greater than the amount needed to reduce unemployment to normal levels. Thus, the deficit fostered by such a program would be automatically limited to the size needed to restore a trigger level of unemployment in the economy.

Second, funds would be obligated in order to keep people working, rather than cushioning them during a period of unemployment. It seems likely that this would be regarded as an advantage of the Federal employment program. If the public is willing to obligate funds automatically to cushion unemployment, it seems reasonable to assume that it would be willing to obligate funds to keep people working.

The political feasibility of an automatic Federal employment program can only be tested once it is actually introduced into Congress. Nevertheless, the widespread acceptance of the automatic unemployment compensation program suggests that such a program might well prove politically feasible. While there are differences between such a program and unemployment compensation, they have in common the automatic obligation of funds for the purpose of combatting recession. Neither depends on altering politically sensitive tax rates.

One resistance to an automatic program is the fear that it will "lock in" our fiscal policy and unalterably bind the Federal government to a particular course. It should be stressed that an automatic program is not an unalterable program. It simply shifts

the bias inherent in the situation. Congress can act, at any time, to reduce the size of the program, or the funds expended, or the level of unemployment that triggers it. If the automatic program is in effect, however, then allowing unemployment to rise to recession levels will require positive discretionary action by Congress and the President. Under the current situation, it takes discretionary action by Congress to prevent a severe rise in unemployment. Given the serious social consequences of high unemployment, it seems justified to shift the bias against high unemployment.

The data show the importance of a program that responds rapidly. The history, as well as the political logic, of discretionary programs, shows that they will almost always respond with considerable delay. The history and logic of the unemployment compensation program reveals an approach that can be accepted by the public, and Congress, and yet operates automatically to achieve effective results. It therefore seems sensible to design an automatic Federal employment program modeled after the unemployment compensation program. Such an approach offers a reasonable hope of being politically feasible as well as effective.

D. GRANTS FOR EMPLOYMENT VS. GOVERNMENT PURCHASE OF GOODS AND SERVICES

An automatic Federal spending program need not earmark funds to state and local governments for hiring persons. Instead, the Federal government could simply purchase goods and services, distributing such purchases geographically according to the pattern of unemployment. Or the Federal government could make unconditional grants to state and local governments, which they would be free to spend however they wished. It will now be argued that earmarking funds for employment should improve the effectiveness of the automatic program.

First, it is likely that grants for employment will reduce unemployment more quickly than the purchase of goods and services. R. A. Gordon explains why:

> As soon as Federal funds are allocated, local governments can immediately begin to hire individuals for these positions. This direct and immediate hiring contrasts with the employment effects generated either by Federal purchases of goods and services or by increased private expenditures resulting from a tax cut. Private employers do not necessarily and immediately respond to increased spending by increasing employment. To some extent, they can reduce inventories, increase hours for the existing workforce, and even raise prices to some extent. Only gradually, as employers are convinced that the increase in spending is permanent and as they come more effectively to utilize those already employed, will they hire new workers. And the delays in hiring will be significant as the increase in demand works its way backward from retailers and manufacturers of finished goods to suppliers of parts and raw materials. In contrast, for the same amount of government expenditure, public service employment would put a larger number of people to work considerably more promptly.[11]

Labor is not a purely variable factor. Employers cannot, and do not want to adjust their workforce instantly, in response to perhaps short-lived changes in demand. Often, personnel costs must be incurred. Training must be invested in the new employee before he can become fully productive. For a period of time, he may not contribute as much as he is paid. If demand soon subsides, it may be difficult to lay off the worker, because of union, or ethical constraints. For these and other reasons, employers adjust the size of their workforce to the level of demand with a lag. In his contribution to the Brookings Model volume, Edwin Kuh draws the following conclusion from his fitted regression equations:

> The main empirical regularity that must be encompassed by theory and structural equations is the much greater amplitude of fluctuations in the level and national income share of cor-

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11. R.A. Gordon [13], 1972.

> porate profits than appears in other factor shares. The close relation of profit variations to output has been found to originate in the lagged adjustment of employment to output, particularly in the case of nonproduction workers. Other short-run fixed or slowly adjusting costs serve to reinforce the squeeze on profits during a cyclical decline and during their rapid expansion in the early recovery phase.[12]

A great deal depends on the employer's expectations about the future. If the employer expects demand to continue to be strong, he will hire new employees; if he believes the rise in demand might be temporary, he will wait, perferring to supply customers out of inventories, and work the current force over-time. Employers are likely to be cautious in a recessionary period, exactly the period for which policy is being prescribed.

The second point in the above passage can be illustrated as follows. Consider a purchase of goods and services for $25,000 from a final producer. This producer may only have generated, say, $8,000 of value added, having begun with $17,000 of inputs purchased from suppliers. Out of the $8,000, perhaps $3,000 will not accrue to labor, but will go to profits, interest, taxes, and so on. The remaining $5,000 may enable the employer to hire one additional worker. Out of the expenditure of $25,000, only $5,000 might go for the hiring of one worker by the producer of the finished product. The $17,000 of inputs would have to be traced to determine the full, employment effect of the expenditure. Since the value added may well be divided among many producers, each is less inclined to alter his employment rather than meet the small increase in demand out of inventories, or over-time. Thus, not only should diffusion take more time; many small changes in demand are likely to have a smaller employment effect than one large increase. In contrast,

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12. Kuh [20], p. 277.

$25,000 allocated to a public employer will quickly mean the hiring of, say, four workers at $5,000 each, with only 20%, or $5,000 spent on complementary inputs.

Empirical evidence tends to support this logic, although the evidence is not decisive. No attempt will be made to survey the literature for specific multiplier values. Instead, the results of one study, with one econometric model, will be used as a guide. While these results must therefore be interpreted with caution, they will serve the purpose here of providing a rough estimate of the relevant multiplier values.

In their simulations with the Brookings econometric model of the U.S. economy, Fromm and Taubman estimate the value of dynamic multipliers which are defined as follows:

> Dynamic multipliers are period-by-period response rates of endogenous variables to exogenous shifts in levels, flows, or parameters. That is, they measure the response along the transient path to final equilibrium positons. This is in contrast to static multipliers which give the equilibrium responses of the endogenous variables to exogenous changes.[13]

The multiplier shows the increase in real gross national product divided by the constant dollar increase in real expenditure, or decrease in taxes. They conclude:

> The results show that, per dollar of expenditure increase or tax reduction, additional government employment is most effective and personal income tax cuts least effective in stimulating real GNP in the first quarter. By the end of the second quarter, all the expenditure policies have nearly equivalent effects while the tax cut policies are even further behind.[14]

While these results support the argument for earmarking funds for direct employment, additional econometric work is

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13. Fromm and Taubman [12], p. 49.

14. Fromm and Taubman [12], p. 49.

necessary before the evidence is considered decisive, especially because of the closeness of the numerical values of the various multipliers, as shown in Table 7.

It should be noted that the three other forms of government expenditure all have greater effects on real GNP from the second quarter, on. Nevertheless, the most important criterion for the automatic spending program should be speed of impact.

The multiplier shows the response of real GNP to alternative policy instruments. An equally important objective, however, is the impact on employment itself. While data are not readily available, it is almost certainly true that the increase in employment per dollar increase in GNP is higher for the government employment instrument than it is for the alternatives, especially at the beginning. In the first round, most of the government expenditure goes into wages and salaries. Under the alternatives, the initial expenditure is only partly for wages and salaries. Only when the value added works its way back to suppliers, and suppliers of suppliers, does a comparable stimulus to employment occur for a given expenditure. It is likely, then, that the employment effect reinforces the GNP effect. For a given expenditure on government employment, not only is the impact on GNP greatest in the first quarter, but so is the impact of GNP on employment.

Thus far, the argument for employment grants, as opposed to government purchase of goods and services, has rested on the speed of impact. There is a second important argument for employment grants, however. Employment grants more effectively concentrate the employment effect of the policy in the recipient geographical area, compared with grants for the purchase of goods and services. Under employment grants, almost the entire initial expenditure funds employment in the recipient area. In contrast, if the initial expenditure is for the purchase of goods and services, the location of the employment effect depends on where these goods and services were produced. If these goods and services were produced elsewhere, the employment effect occurs elsewhere.

Table 5

INCREASES IN REAL GROSS NATIONAL PRODUCT
PER CONSTANT DOLLAR OF EXPENDITURE INCREASE OR TAX REDUCTION

	Multipliers									
	1960:3	1960:4	1961:1	1961:2	1961:3	1961:4	1962:1	1962:2	1962:3	1962:4
G_{CD}	1.6	2.0	2.4	2.1	2.2	2.1	2.7	2.8	2.8	2.7
G_{CN}	1.4	2.0	2.3	2.4	2.5	2.4	2.8	2.9	2.9	2.9
E_G	1.7	1.9	2.1	2.1	2.1	1.7	1.9	1.9	2.0	2.0
G_{IC}	1.6	2.2	2.5	2.4	2.6	2.5	2.9	3.0	3.0	2.9
Y_D	0.8	1.0	1.2	1.1	1.2	1.2	1.2	1.2	1.2	1.2
Y_D+MP	0.8	1.0	1.2	1.3	1.4	1.5	1.7	1.8	1.8	1.8

G_{CD} = government purchase of durable goods
G_{CN} = government purchase of nondurable goods
E_G = government employment
G_{IC} = new public construction activity
Y_D = disposable personal income
Y_D+MP = disposable personal income plus monetary policy

Source: Fromm, Gary and Taubman, Paul, Policy Simulations With an Econometric Model, (1968), Amsterdam, North Holland Publishing Company, p. 48.

It is true that in either case, the multiplier effect will in part generate demand for goods and services produced elsewhere. There is no way to limit the employment effect exclusively to the target area. Nevertheless, the employment grant pinpoints the employment effect of the initial expenditure, while the general purpose grant does not. This difference is important in light of the evidence given earlier on the variation among areas during cyclical fluctuations. It is highly desirable that the policy instrument be able to successfully stimulate areas in proportion to the rise in unemployment in the area. This requires that as much of the employment effect as possible be concentrated in the area receiving the grant.

A hypothetical example will illustrate the difference. Assume that under an employment grant of $100,000, all of it goes for employment in the area; while under an equal general purpose grant, only $50,000 does. This $50,000 might come about as follows. Of the $100,000, perhaps $30,000 might be spent on employment, and $70,000 on other inputs. Of these other inputs, suppose that $20,000 were generated in the local area, and $50,000 elsewhere. Thus, of the $100,000, $50,000 would stimulate local employment, and the other $50,000 would stimulate employment elsewhere. Assume further that half of the multiplier demand is met by output produced in the area, and half from output elsewhere. Then if the multiplier is two under both grants, the $100,000 of income generated in the recipient area by the employment grant will induce an additional $50,000 of value-added in the area, and $50,000 outside the area. Thus, the employment grant generates $150,000 out of its total of $200,000 of value added in the local area. The $50,000 of income generated in the recipient area by the general purpose grant will induce, through the multiplier, an additional $25,000 of value-added in the area, and $25,000 outside the area. Since the area is small relative to the rest of the nation, the other $50,000 of income generated outside the area will have its full multiplier effect occur outside the area (an additional $50,000). The general purpose grant would generate $75,000 out of its total of $200,000 in the area. Thus, the employment effect would be approximately twice as great within the area under the employment, as under the general purpose grant.

The example is only hypothetical, but the magnitudes are not unreasonable. A significant fraction of any unconditional grant will go to the purchase of inputs other than labor. The ability, therefore, to stimulate employment in accordance with the impact of the recession in the area should be greater if the Federal grants are earmarked for employment, rather than for general spending.

E. GRANTS TO PUBLIC EMPLOYERS VS. GRANTS TO PRIVATE EMPLOYERS

Why not give grants to private as well as public employers? There are several reasons for restricting grants to public employers. These will now be discussed in turn.

First, the program would become much more complex administratively if private employers were included. Each local area contains at most several governmental units. Given the total employment effect desired in the area, the total grant for the area is determined. This grant can then be divided among the several governmental units in proportion to their own employment. This is the procedure used in the current Public Employment Program.

In contrast to the small number of public employers, each area contains many private employers. How will the total grant for the area be divided among the private employers in the area? One option would be to give each employer the same fraction of the total area grant as its share of area employment. Even if this is considered equitable, the Manpower Administration must now supervise a program that involves hundreds of "program agents." To make sure that these funds are in fact being used for employment, at least a sample of these employers will have to be investigated periodically. Actually, because of the maintenance of effort problem, it will be necessary to directly supervise each employer, a clearly unfeasible task if private employers are included.

The maintenance of effort problem is the second reason for

restricting the program to public employers. When a public or private employer receives funds from the Federal government, earmarked for a specific purpose, it will be tempted to reduce its own spending for that purpose, substitute Federal funds for its own, and use the savings however it pleases. This well known problem of maintenance of effort is bound to arise here. Its consequences will be less serious, however, if the program is restricted to the public sector.

Direct supervision tends to restrain such substitution of funds. Since there are only a few public employers in each local area, direct supervision is feasible, as the experience of the current Public Employment Program shows. It will be possible to make sure that the receipt of Federal funds is not accompanied by layoffs of current employees, and the direct substitution of new Federally funded employees for current ones. If private employers are included, there are too many for direct supervision. Without such supervision, it will be easy for private employers to either lay off their own employees, or leave vacant slots that open up through attrition. In either case, Federal funds will simply replace the private employers funds, without adding to employment. Yet such behavior cannot be prevented without direct supervision.

The formal budget process gives public employers less flexibility for substitution of funds. Once the budget is passed for the fiscal year, it is often not easy to shift funds among categories. When the Federal funds become available, because unemployment has risen, most governmental units will have difficulty cutting back their own funds for personnel until the next budget cycle. Further, the budget is a matter of public record, and the Manpower Administration can check the program agent's behavior against its budget.

In contrast, private businesses usually do not have a formal, inflexible annual budget cycle. It is much easier for a business to reduce its own personnel expenditure, at any time in the year, than for a governmental unit. Furthermore, the business does not

have a formal budget document that is a matter of public record. Thus, even if there were direct supervision, it would be difficult to check whether the business was spending less on employment than it had originally planned.

Although the public employer is restrained during the current budget period, eventually it can respond to the availability of Federal funds. Once the next budget period approaches, there is nothing to prevent the governmental unit from planning lower expenditures of its own for employment. There is no way for the supervising Manpower Administration to prove it is spending less than it otherwise would have. Thus, eventually substitution is bound to occur here, as in the private sector. But the consequences of such substitution are likely to be less serious.

The consequences depend on how the employer uses the savings made possible by the Federal grant. If the savings are spent, or transferred to others to spend, then in spite of the leakage there will be stimulus to employment. If the savings are simply accumulated, however, then the leakage will reduce the employment effect of the grant.

A governmental unit has little incentive to permanently increase its budget surplus beyond some optimal point. Its purpose is not to maximize its surplus, but rather to meet political objectives. It will tend to use the savings to increase services, or reduce taxes - both of which are desired by the electorate, rather than primarily increasing its surplus. In contrast, a private business seeks to increase its surplus, or profit. That is a major goal of its activity. In a period of rising unemployment, and slack demand, it is possible that the private business will choose simply to accumulate surplus, rather than spend the savings. Thus, the leakage is likely to be more serious for private than for public employers.

In the public sector, the maintenance of effort problem means that grants earmarked for employment will be partly converted into grants for general purpose spending. Even if such conversion were complete, the general purpose grants would of course stimulate employment and output. Since grants for employ-

ment should be more effective than general purpose grants, the failure to maintain efforts reduces somewhat the countercyclical efficiency of the program. Regulations to delay the conversion process are, therefore, worthwhile. Nevertheless, since general purpose grants are sufficient for the program to succeed, the failure to maintain effort cannot be fatal.

This brings us to the third reason for limiting the program to public employers. Because of the inevitable maintenance of effort problem, the equity of the distributive effects of the program must be considered. If private employers are included, then it is certain that many employers will simply increase their profits without genuinely employing more persons than they would anyway. These employers will simply substitute Federal funds for their own, adding the savings to their profits. Since these additional profits will not have stimulated additional employment, it will be accurate to describe them as windfall profits. In contrast, even if public employers do increase their surpluses to some extent, no private gain results. Thus, the public can be assured that the program is not generating windfall private gains.

Thus, the exclusion of private employers is justified in three ways. First, inclusion would create difficult administrative problems. Second, the maintenance of effort problem would become much more serious, tending to undermine the program. Third, there would be the likelihood of windfall gains.

Although only public employers are to be included, it should be realized that these grants will indirectly stimulate the private sector as well. The multiplier effect operates on the private sector, and an important share of the total employment effect will be contributed by the private sector. Thus, the decision to exclude private employers from receiving employment grants does not mean that private employers will not contribute to the increase in employment. The decision means that for the reasons cited above it is preferable to stimulate the private sector indirectly, and to limit direct grants to public employers.

F. THE AUTOMATIC FEDERAL EMPLOYMENT PROGRAM: A SHORT-TERM HOLDING ACTION

The automatic Federal employment program is designed to provide a short-term holding action, sustaining the level of employment until aggregate demand can be restored. There is broad agreement among economists that the standard tools of monetary and fiscal policy - the control of the money supply, and the level of tax rates and government spending - are the proper means for eventually restoring aggregate demand to a desired level. It is also agreed that these policy instruments do not move quickly enough to prevent a significant initial burst of unemployment, and its continued existence at a relatively high level for a significant length of time.

The automatic Federal employment program is not intended as a substitute for these alternative instruments of fiscal and monetary policy. They should be applied as quickly as the political process will allow. What is lacking currently, is an instrument that can go rapidly into effect as soon as unemployment rises above some trigger rate, and provide a short-term holding action until the standard tools of fiscal and monetary policy can be brought into play.

G. BUILDING ON THE PUBLIC EMPLOYMENT PROGRAM

The current Public Employment Program, authorized by the Emergency Employment Act of 1971, takes a first step towards serving this function. But its design has three fundamental weaknesses. It will be useful to briefly describe the features of the Public Employment Program (PEP), its recent history, and then set out its three liabilities.

The Public Employment Program (PEP) was authorized by the Emergency Employment Act (EEA), which was signed into law in July, 1971.[15] The Emergency Employment Act authorized $1 billion in its first year, and $1.25 billion in its second year, for pub-

lic service employment. Federal grants for employment were allocated to state and local governments according to a formula involving the amount of unemployment in the jurisdication of the recipient. To receive funds, the state or local government was required to draw up an application describing the list of jobs that would be funded. Upon approval of the grant application by the Department of Labor, funds were released. Funds were allocated during the fall and winter of 1971-1972. In all, about 150,000 jobs were funded in the first year of the program, entailing an expenditure of about $7,000 per job ($1 billion total).

PEP is automatically authorized when the national unemployment rate exceeds 4.5%. Because of this, the program is often said to be automatically "triggered" at 4.5%. Yet it must be stressed that no funds can be obligated to state and local governments until Congress acts to appropriate funds. The trigger does not eliminate the role of the appropriation process. While PEP is authorized according to the national unemployment rate, funds are allocated to local areas according to the severity of unemployment in each area. PEP is clearly a counter-cyclical program, since no funds can be obligated to any area, regardless of its unemployment rate, unless the national employment rate has risen above 4.5%. Yet it does take into account regional variation in unemployment through its allocation formula.

To insure that as many jobs as possible would be created, 90% of the funds had to be spent on wages and salaries of PEP employees. All applicants for jobs had to be either unemployed or underemployed at the time of hiring. The composition of the participants was supposed to reflect the composition of the

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15. This brief description of PEP is based on the following sources: U.S. Congress [43]; Levitan and Taggart [24].

unemployed in the area, in terms of race, age, sex, and so on. The maximum salary that could be paid out of Federal funds was $12,000, though the average salary was considerably lower ($7,000). At least two-thirds of the jobs were to be non-professional, but up to one-third could be professional. Thus, jobs were to be created for the highly skilled unemployed, as well as those with less skill.

No individual previously employed by the state or local government (the program agent) could be hired unless he had not been employed with the same program agent for at least thirty days. This clause attempted to prevent program agents from performing "paper hires," - hiring individuals already on their payroll, thereby saving their own funds. The program agent was required to supply 10% of the funds for the program, but this could be done in kind, rather than cash (i.e. supplies, equipment, administrative services, etc.) and often was. Since 90% of the Federal funds had to go for wages and salaries, funds for training and other supportive services were limited. The 10% were restricted to these, and could not be used for complementary inputs.

Administrative monitoring would be done by project officers of the Regional Manpower Administration of the Department of Labor. To aid this effort, only program agents having jurisdiction over a population of at least 75,000 would be dealt with directly by the Manpower Administration. All smaller program agents would be subagents to larger ones. A program agent was responsible for its subagents. Periodic on-site reviews were conducted by these project officers to check actual practice against program requirements. Written reports were also submitted. Within the guidelines, the agents were given substantial freedom to decide which jobs would be filled. Violation of the regulations could lead to partial or complete de-obligation of funds. The Labor Department threatened to de-obligate funds to program agents that were not hiring at a rapid rate. Within about five months, about 100,000 persons were at work.

The Public Employment Program attempted not only to counter recession, but also to provide special assistance to the disadvantaged. These aspects of the program are discussed in Part II, "The Design of a Federal Employment Program in a Strategy to Raise Low Earnings." These two objectives - countering recession and assisting the disadvantaged - require two distinct employment programs, if they are to treat each effectively. Here in Part I an employment program for recession is proposed and analyzed; while Part II proposes and analyzes an employment program for persons with low earnings.

While the Administration seemed pleased with its implementation of PEP, the President's proposed budget for fiscal year 1974 omitted funding for PEP, giving the following explanation:

> Emergency employment assistance. - Since 1972, this program has enabled 17,500 state and local agencies to create transitional jobs for the unemployed during a period of high unemployment. These new jobs helped state and local governments provide needed services which they otherwise could not finance. By the end of 1973, about 280,400 people will have held public service jobs financed with emergency employment assistance. Since the program began, unemployment has fallen and the financial ability of state and local governments to meet demand for services has improved. Most of the remaining unemployed need more assistance than is possible under this program and they can be more effectively served by regular manpower training programs. For these reasons the program will not be continued in 1974, although outlays of $580 million will be made for individuals completing their transitional employment during the year.[16]

PEP, however, retained substantial Congressional support, especially in the Senate. In the House, the Select Subcommittee

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16. U.S. President [51], p. 131.

on Labor reported a bill to extend PEP for three years.[17] The bill was defeated on the House floor in a close vote. The Subcommittee then proposed a one year extension, part of which was then incorporated into the Manpower bill passed by the House in 1973, as Title II of that bill.

Meanwhile, the Senate, by a 74-21 margin, voted in July 1973 to extend PEP for two years.[18] In reporting the bill to the Senate floor, the Senate Subcommittee on Employment, Poverty and Migratory Labor (of the Committee on Labor and Public Welfare) stated:

> The Emergency Employment Act of 1971 has demonstrated that a program of public service employment can be effective in providing jobs for the unemployed and public services for hard-pressed communities.[19]

The conclusions of Levitan and Taggart in their evaluation of the first eighteen months of PEP, prepared for the Senate Subcommittee on Employment, Poverty and Migratory Labor, reflect this sentiment:

> 1. PEP Is An Effective Countercyclical Strategy - Possibly the most significant lesson is that a public employment program can be an effective countercyclical tool and that such a program deserves top consideration in a strategy to achieve an economy of high employment. The program dispelled any doubts about the timeliness of government action...
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> 2. There Is Work Worth Doing - A second observation is that the public sector can absorb several hundred thousand workers, assigning them to jobs indistinguishable from those already being performed.[20]

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17. Based on a conversation with the staff of the House Select Subcommittee on Labor.

18. Nelson [26].

19. U.S. Senate Committee on Labor and Public Welfare [55], 1973, p. 1.

20. Levitan and Taggart [24], 1973, p. 39-40.

Both the House and Senate passed Manpower bills in 1973. The House version included a provision for public service employment for areas with substantial unemployment. In conference, the Senate accepted this section.[21] Thus, the Comprehensive Employment Training Act, signed into law by the President in December, 1973, included Title II, "Public Employment Programs."[22] Title II authorized $250 million for fiscal year 1974, and $350 million for fiscal year 1974, to fund public service jobs in areas of "substantial unemployment," defined as areas with unemployment in excess of 6.5%. In effect, Title II of CETA continues only section 6 of EEA - the section dealing with special funds for areas with especially high unemployment. Congressional supporters of PEP were unable to get the main section of EEA - section 5 - which provides funds for all areas when unemployment rises above 4.5% nationally, incorporated into the Act. Thus, CETA does not include the main countercyclical part of PEP. Title II authorizes $350 million for high unemployment areas, a somewhat larger authorization than section 6 of EEA which authorized $250 million for such areas. As of April, 1974, however, no funds had yet been appropriated for Title II by Congress.[23] Section 5 of EEA had authorized $1 billion in its first year, and $1.25 billion in its second year. Thus, the bulk of the funding for public employment has been omitted from CETA.

As of April 1974, the original Public Employment Program, authorized by the Emergency Employment Act of 1971, is due to end in June. PEP has been phasing out gradually throughout this

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21. Based on a conversation with the staff of the House Select Subcommittee on Labor.

22. U.S. Congress [44].

23. Based on a conversation with the staff of the Regional Manpower Administration, San Francisco, California.

fiscal year. While the Senate voted to extend it, the House defeated such a measure by a close vote. According to the staff of the House Select Subcommittee on Labor, which handles this legislation, further action is unlikely during 1974.

Beginning in the second half of 1974, when the original EEA has expired, therefore, the situation will revert to that which existed prior to the 1970 recession (except for the availability of funds to areas with unemployment above 6.5%). There are currently conflicting forecasts about whether the economy is entering a recession, and if so, how severe it will be. Should the economy avoid recession, the expiration of EEA will be of minor consequence for the time being. If the unemployment rate does rise significantly above 5%, then the available policy instruments will be no better than in 1970. Congress will be required to first authorize spending programs, such as EEA, and then appropriate funds.

The familiar pattern of lags in discretionary policy is in process in April 1974. Recently, those Congressmen and Senators who fear recession have proposed a tax cut. Yet at this point in time, there are conflicting forecasts. Many in Congress who might support a tax cut if they were convinced a severe recession was imminent will not do so until the uncertainty has been reduced. This will probably not occur unless the unemployment rate reaches recession levels. Others in Congress are especially reluctant to support a tax cut at a time when inflation is at a very high level. It is likely, therefore, that no tax cut will be enacted unless the economy is already well into a serious recession. Discretionary fiscal policy, now as in the past, is unlikely to operate until a good deal of damage has been done.

There are some in Congress who would not only like to restore the countercyclical part of EEA, but to go beyond it. Senators Javits and Nelson - the ranking members of the Subcommittee on Employment, Poverty, and Migratory Labor - and others, have introduced a bill that would amend CETA, and establish an "Emer-

gency Employment Assistance Fund."[24] Congress would appropriate money into this revolving fund, periodically, especially in times of prosperity. Then, funds would be released if either the President or Congress so orders, or if the national unemployment rate exceeds 6% for three consecutive months.

While discretionary action would be required by the President or Congress to release funds while the unemployment rate was below 6%, the proposal - S. 2993 - would operate much more quickly than PEP, provided Congress appropriates sufficient funds in advance. If this is done, then the President could release funds at any time; and Congress would only have to pass a concurrent resolution. Furthermore, if the unemployment rate reaches 6%, then funds would be automatically obligated, without any discretionary action. S. 2993 will be discussed further when the design of an anti-recession program is analyzed. It is unlikely, according to the Subcommittee staff, that the Senate will consider S. 2993 until the Fall of 1974, or that the House will consider similar legislation at all during 1974. Thus, while such a bill would do much to improve the capacity to counter recession, it will not be ready for any recession that might occur in the near future.

With respect to the goal of countering recession, the current Public Employment Program as it now stands has three fundamental weaknesses. First, it is not truly automatic. It is true that PEP is automatically authorized when the national unemployment rate rises above 4.5%. Yet this is hardly a genuine "trigger," since Congress must at some point go through the appropriations process before funds can be obligated to state and local governments. The "trigger" eliminates one political hurdle, but not the other. This is in contrast to the unemployment

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24. U.S. Senate, Committee on Labor and Public Welfare [56], 1974.

compensation program, which obligates funds automatically when unemployment rises.

Second, unlike unemployment compensation, the amount of money obligated does not vary automatically with the level of unemployment. A new appropriation by Congress is required to change the amount of funds obligated, and this can occur just once a year. Third, PEP currently generates too few jobs to deal adequately with cyclical unemployment. PEP now generates, directly and indirectly, about 300,000 jobs. Yet when unemployment rises from 4.5% to 6.0%, unemployment increases by about 1.3 million, over four times that number.

The design of an automatic Federal employment program that builds on the current Public Employment Program, but corrects its three fundamental weaknesses, will now be described and analyzed. The proposed program shares the same intent, and some important features, with S. 2993, but goes beyond it, in an effort to deal comprehensively with the three shortcomings of PEP.

Chapter 2

THE DESIGN OF AN ANTI-RECESSION PROGRAM (ARP)

The proposal that will be described and analyzed will be called the Anti-Recession Program, and will referred to as ARP.

A. A TRIGGER VS. A TARGET FOR THE ECONOMY

The Anti-Recession Program (ARP) will attempt to close the entire gap between actual unemployment and the trigger national unemployment rate. It must be stressed that the trigger should not be interpreted as a target unemployment rate. There are at least two reasons for this.

First, the target is an objective that policy strives to achieve. The trigger need only be a danger point. There may not be a strong consensus for a specific target national unemployment rate. But there is broad agreement that it is undesirable, and unnecessary for reasonable price stability, for the national unemployment rate to persist above 5%. A trigger of 5.0% need not imply that society is satisfied with this level of unemployment, but only that society is clearly dissatisfied with any level above it.

Second, even if there were unanimous agreement on a single target unemployment rate for the economy, it will be shown that it may be necessary to set the trigger somewhat above this target. The reason will be described in detail, shortly. Briefly, in the upswing, there will inevitably be a lag in phasing out funding. This lag means that the program could contribute to inflationary pressure during a rapid upswing unless the trigger is somewhat above the target rate.

The constraint on lowering the unemployment target, and therefore the unemployment trigger rate, is of course concern over inflation. It will be useful to briefly summarize the

results of recent research that bear on this issue. In "The Inflation Process in the United States," (1972), Eckstein and Brinner conclude as follows:

> With the existing structure of the economy, the maximum sustainable employment goal appears to be an unemployment rate of approximately 4 percent.[1]

Robert J. Gordon's estimate of the Unemployment-inflation trade-off yields results similar to that of George Perry. Gordon writes:

> The wage-price model supports Perry's finding that the Phillips curve shifted to the right between the mid-1950's and the late 1960's . . . To achieve a steady long-run inflation rate rate of 3.0 percent with today's unemployment dispersion requires an unemployment rate of 5.2 percent, whereas this inflation rate was consistent with a 4.1 percent unemployment rate with the dispersion of 1956. Or, putting it another way, the actual average 1956 unemployment rate of 4.1 percent is associated with a long-run rate of 3.0 percent with the 1956 level of unemployment dispersion, but with a 4.9 percent long-run rate of inflation with the level of dispersion that would accompany an official unemployment rate of 4.1 percent during the next several years.[2]

These economists share the view that, at least in an important range, there exists a trade-off in the long-run between unemployment and inflation. This view has been challenged by Friedman, Phelps, and others, who assert that in the long-run there is no trade-off, and that the economy cannot be pushed below some "natural" rate of unemployment. The advocates of this position explain that "natural" does not mean inevitable, and that structural policies, such as increasing competition, eliminating minimum wages, and so on, could reduce this "natural"

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1. Eckstein and Brinner [8], p. 42.

2. Gordon [15], p. 139.

rate. Without such policies, however, they assert that we cannot buy a reduction in unemployment by accepting more inflation. Since they believe that efforts to lower unemployment will only succeed in accelerating inflation, their position has been called the "accelerationist view."

How high is this "natural" unemployment rate? William Fellner writes the following:

> In the controversy over models of inflation, I lean towards the accelerationist view. . . The dangers this section discusses result from the near certainty that at "low" levels of unemployment the policies based on Phillips-type systems would keep changing the expectations-generating structure and that they would lead to accelerating inflation . . . There is reason to assume that, given our methods of measuring unemployment, 4 percent is such a level of unemployment at the present stage of American economic development, except for the qualification to be added in the last section of this paper.[3]

That qualification, interestingly, is that a public service employment program, similar to the kind that will be proposed here, might be able to reduce unemployment in spite of the natural rate. He feels such a program, if administered properly, should be able to lower unemployment without contributing to accelerating inflation. He writes:

> The important question that arises is whether systematic arrangements could be made - not simply emergency measures taken in recession, to secure for these persons work opportunities in the public sector.
>
> To serve the present purpose, the method of financing would, of course, have to be non-inflationary, but, in principle at least, there is no reason why inflationary methods would have to be used. Concerning the risk that such a program would create or accentuate resource scarcities, a reasonable degree

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3. Fellner [11], p. 479.

> of optimism may be expressed, because - unless something goes wrong with the administration of such a program - the individuals in question would not fall into one of the many categories in which shortages tend to develop but into a category in which there is excess supply. Reduction of this excess supply would not in itself create shortages.[4]

Fellner's argument would apply to a permanent program to aid the disadvanted, described and analyzed in Part II, as well as to the program proposed here for countering recession. In Fellner's view, if lower unemployment is achieved through a public employment program, that unemployment rate will be associated with less inflationary pressure.

Finally, Martin Feldstein provides a convenient summary of current views in his study, "Lowering the Permanent Rate of Unemployment:"

> There is still a great deal of controversy about this issue. Although most empirical studies (e.g. Solow - 1969 and Gordon - 1970) do not support Friedman's (accelerationist) position, this may merely reflect an inadequately specified measure of expected inflation or an historical period in which high rates of inflation did not persist very long. Empirical work on this problem is likely to continue for some time. What might now be described as a "moderately optimistic" position, supported both by theoretical analysis (Tobin, 1972) and empirical research (Eckstein and Brinner, 1972) is that some tradeoff between inflation and unemployment exists as long as the rate of inflation is relatively low but there is some rate of unemployment below which the economy cannot be moved by raising the rate of inflation. Eckstein and Brinner suggest that this occurs at an unemployment rate in the range of 4 to 4.5 percent.[5]

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4. Fellner [11], p. 482-483.

5. Feldstein [10], p. 3.

The implication of this research is that the trigger for the automatic program can be safely set at a level which will maintain unemployment between 4.5% and 5.0%, and will not attempt to push unemployment below this level.

B. A GENUINE TRIGGER THAT AUTOMATICALLY OBLIGATES FUNDS

The current Public Employment Program contains a feature that has been referred to as a "trigger." While the program is authorized for two years, the authorization is automatically cancelled if the national unemployment rate falls below 4.5% for three consecutive months, at any time during the two year period, and conversely, if the unemployment rate rises again above 4.5% for three months, funds are automatically obligated, provided there has previously been an act of appropriation by Congress.

While this "trigger" is a step in the right direction, it is a very small step. The key to an effective instrument is the elimination of all discretionary action. The Public Employment Program does not eliminate the appropriations process. When unemployment rises above 4.5%, funds are only obligated if Congress has at some point acted to appropriate funds. If not, the trigger is really an authorizations trigger. For funds to be obligated, appropriations must still occur.

Under the Anti-Recession Program, it is proposed that funds be automatically obligated from the Federal government to state and local governments whenever the national unemployment rate exceeds the trigger level. No discretionary action by either Congress or the President will be necessary to release the funds. In this way, a major obstacle to rapid response to a rise in unemployment will be removed.

An automatic obligation of funds in response to high unemployment has already been proposed in S. 2993, briefly described earlier. While S. 2993 takes a significant step in the proper direction, it is not as comprehensive as the Anti-Recession Program (ARP). It will be instructive to compare the two.

First, S. 2993 would automatically obligate funds when the unemployment rate exceeds 6.0% for three months. This trigger is unnecessarily high. ARP proposes a trigger between 4.5% and 5.0%. Later, the effects of such a trigger will be examined. There is no reason why the economy should be allowed to persist at an unemployment rate just under 6% without triggering the program. S. 2993 would react automatically only to severe recession (above 6%), while ARP would counter any rise in unemployment above 5%, usually associated with moderate recession.

Second, S. 2993 establishes a special trust fund to finance the program.[6] Funds could be obligated - automatically, or otherwise - only if they had previously been appropriated into the trust fund by Congress. The disadvantage of such a fund is that Congress must appropriate money in advance, through discretionary action. While it may be hoped that Congress would keep the fund well supplied, there is no guarantee that this would occur. In a period of prosperity, Congress may prefer to allocate its revenues elsewhere, failing to provide for future recessions.

The creation of a trust fund may improve the political appeal of the program. Provided Congress keeps the fund well supplied, its use will do no harm. The point to be emphasized, however, is that there is no need for such a fund. The appeal of a trust fund derives from a balanced budget view of fiscal policy that is not supported by modern economic theory. In recession, sound economics requires whatever budget deficit is necessary to restore full employment and production (without over-shooting, thereby generating inflationary pressures). It must be stressed that under ARP, the amount of funds obligated will be strictly limited. ARP will obligate only an amount nec-

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6. U.S. Senate, Committee on Labor and Public Welfare [56], 1974.

essary to return unemployment to its trigger rate. It is economically sound for such an obligation of funds to occur, regardless of whether money has been previously appropriated into a trust fund.

Since there is no economic reason for the trust fund, ARP does not include such a feature. The trust fund will be harmful if Congress proves unwilling to provide adequately, in advance, for future recessions. It should be realized that the social security, and unemployment compensation trust funds, are financed through special taxes. They do not depend on discretionary acts of appropriation of Congress. Thus, the fact that these trust funds are well supplied, and have worked well, is no evidence that a trust fund financed by Congressional appropriation would prove adequate.

The objective should be to remove the need for any discretionary action, including the appropriations for the trust fund. It may be that a trust fund will greatly enhance the chance of passage of such a program, and that in practice, Congress will keep the fund well supplied. It is hoped, however, that since the trust fund serves no economic purpose, and adds some risk, that a program can be passed without such a feature.

C. A FORMULA THAT AUTOMATICALLY VARIES FUNDING WITH THE LEVEL OF UNEMPLOYMENT

Under the Public Employment Program, a fixed amount is authorized once the national unemployment rate rises above 4.5%. Congress is able to vary the amount it appropriates, as long as it does not exceed the authorization limit. But this requires deliberate action. Just as ARP proposes to obligate funds automatically, it will also vary the amount to be obligated automatically, according to a formula reflecting the level and trend of the national unemployment rate.

How often should the level of funding automatically be changed under ARP? Ideally, funding should change whenever new data shows a change in the national unemployment rate. Such

data becomes available once a month, as a result of the Current Population Survey, the official source of unemployment data. Yet the ideal must compromise with what is administratively feasible. Monthly changes in the amount of funds allocated to each program agent might prove too difficult to adminster.

On the other hand, it was shown earlier that the level of funding must be changed more than once a year. Like most discretionary Federal programs, Congress appropriates money for PEP only once a year. Yet data on the speed with which unemployment rises in a downswing clearly demonstrate the need for a change in the level of funds at least several times a year. The Anti-Recession Program therefore tentatively calls for an automatic change every quarter, or four changes per year.

It should be remembered that a major obstacle to the quarterly change of funding levels has been overcome by doing so automatically. It is hard to imagine Congress, through discretionary action, changing the funding that often. The automatic obligation, guided by a formula to be described shortly, eliminates this bottleneck. The issue then becomes; how quickly can the recipient program agents adjust to changes in their funding? Once they have been accustomed to the program, they should be able to respond to increases in funding quite rapidly. It is a decrease in funding that would create problems, since persons might have to be laid off. Clearly, cutting funds frequently would cause inequities for employees, and serious administrative and planning problems for program agents.

It is not necessary to prevent frequent increases in funding simply because frequent decreases would be undesirable. A sensible approach is to allow this basic asymmetry. Thus, the Anti-Recession Program features the following special protection: the guarantee of a full year of funding for each ARP job created. This means that once an ARP job is created, funding will continue for a period of one year, regardless of any decrease in the unemployment rate during the year. To see how the guarantee would affect ARP, it is useful to consider a concrete illustration.

A new wave of ARP jobs will be created every quarter. The national unemployment rate in December will determine the number of new ARP jobs created in January, and thereby, the number of ARP jobs in existence over the next three months. Similarly, the unemployment rate in March will determine how many new ARP jobs are created in April. Suppose a program agent is entitled, according to the unemployment rate in March, to receive $300,000 per month, which can finance the creation of 500 jobs if each job averages $600 per month. Under the one year guarantee, the Federal government is then obliged, under ARP, to grant at least $300,000 to the program agent each month for a period of one year, even if the unemployment rate falls.

Suppose the unemployment rate increases in June above its level in March, and the desired number of ARP jobs, including those already in existence, rises to 600 for this program agent. In July, therefore, the program agent should receive an additional $60,000 per month, so that the total grant in July is $360,000 per month, enough to finance a total of 600 jobs, at an average of $600 per month per job. The 500 jobs created three months earlier can be continued, and 100 new jobs, created. Funding for the 500 jobs, however, is only guaranteed until the following April, while funding for the new 100 jobs is guaranteed until the following July. Thus, the program allows an increase in ARP jobs in response to the rise in unemployment during the quarter.

Suppose that in September, unemployment falls, so that the desired level of ARP jobs falls to 400. In spite of this, the program agent will continue to receive $360,000 for the month of October, enough to continue financing all 600 jobs. The Federal government will not be able to cut the funds to the program agent until April, when the one year commitment to the first 500 jobs ends.

Because the one year guarantee creates a lag in the phasing out of the program during the upswing, it is important to review more carefully why it is essential. First, program agents must

be assured of funding for a reasonable period of time for each job they create, or the productivity of each job will be less. Without this assurance, program agents would create only short-term tasks for new hires, since funding might terminate at the end of one quarter. It would not make sense to allow ARP employees to work in close coordination with regular employees. If regular jobs depended on ARP jobs, disruptions might occur at the end of each quarter, if ARP employees had to be laid off. Without the guarantee, there would be a tendency to assign ARP employees tasks that were largely independent of those performed by other employees. But this constraint might well reduce the potential productivity of ARP employees. Similarly, it would not be worth investing in training, if the employee might have to be laid off in just three months.

In contrast, the guarantee of a year's funding enables program agents to plan intelligently. ARP jobs can be better integrated with other jobs, tending to increase their productivity. It will become more worthwhile to train ARP employees, since they will be retained for at least a year. Thus, the one year guarantee is important for productivity.

Second, potential ARP employees are entitled to minimum job security. While they can always be discharged for poor performance, they at least deserve the assurance that the job slot will exist for at least one year. Once in the job, knowledge that it will be funded for at least a year will encourage employees to take their work seriously, in order to retain their position. A job that may end in a very short time does not inspire an employee to perform well. Thus, the effect of the guarantee on employee morale should also improve productivity.

Of course, one year may not be the optimum period for the guarantee. A period somewhat shorter or longer may be preferable. The optimum is chosen by weighing the trade-off. The shorter the guarantee, the less the lag in phasing out the program during the upswing. The less the lag, the closer the trigger can be set to the target rate, without fear of contributing to inflationary pressure during an upswing. The shorter the

guarantee, the lower the productivity of the employees, the greater the administrative problems of the program agents, and the lower the job security of the employees. While experience with the program should help decide the optimum, it seems clear that the guarantee must be significantly longer than one quarter. The effect of a one year guarantee during the upswing will be examined shortly.

ARP requires a formula for determining the number of jobs that should be created every three months. The formula is necessary to eliminate discretionary action, the major source of delay in current instruments. Here, we will concentrate on the formula for determining the total number of jobs to be created nationally. Afterwards, the formula for allocating funds among local areas will be considered.

To determine the number of jobs, and total funding, for the nation, perhaps the simplest method would be to use only the number of unemployed during the previous month, or perhaps the previous three months, without trying to project the change in unemployment over the next three months. Under this naive formula, either it would be assumed that unemployment will remain constant, or it is simply accepted that ARP will always lag behind the level of unemployment.

It seems clear, however, that the efficiency of the program would be improved if an attempt is made to anticipate the change in unemployment over the next three months. Thus, if unemployment is expected to rise in the coming quarter, more ARP jobs should be created at the beginning of the quarter than if unemployment is expected to remain constant. Ideally, the objective should be to predict what unemployment will be nationally, three months later, and then create the number of ARP jobs which, together with the jobs created by the short-term (roughly one quarter) multiplier, will restore unemployment to a target level three months later.

Given this objective, the next step is to decide how the unemployment level three months later should be projected. It would be possible to leave this to the discretion of some offi-

cial group or agency - such as the Council of Economic Advisors, the Bureau of Labor Statistics, or a new unit created specifically for this purpose. The alternative is to use a formula that automatically projects the level of national unemployment expected three months later. An example of the formula would be the following: Expect unemployment to change over the next three months by the same amount and in the same direction it changed over the last three months. Another formula would be: Expect unemployment to change, over the next three months, by one-half the amount, and in the same direction, as it did over the last three months. Still another formula would be to compute the simple average of the projections of a fairly large number of reputable forecasters, (who may use a variety of techniques, from intuition to complex econometric models) who are designated in advance. Both the large number, and independence of such forecasters, and the fact that they are designated in advance, assures that no discretion will be given to the administering agency. The formula can of course be made considerably more complex.

The distinguishing feature of a formula is that it leaves no discretion in the hands of a single agency or group. The disadvantage of a formula is that special factors, or information not embodied in it, cannot be used. For example, it might be known that the Federal Reserve Board has been rapidly expanding the money supply. The simple formulas cited above would not take this into account, while decision-makers could. Of course, a more complex formula could take such behavior into account. Indeed, the "formula" might well be the prediction derived from a complex econometric model of the economy. Such a model would take into account most factors that ought to be considered in making predictions.

It might be argued that such models are too rigid to incorporate certain phenomena, and that intuition and discretion will improve such forecasts. Even if this were true, there is a formula that should be able to capture such adjustments. That formula is the simple average of the projections of a large num-

ber of independent forecasters, who individually are free to make such adjustments. The crucial feature is that discretionary power must not be concentrated in a single agency. If discretion is scattered among many independent forecasters, designated in advance, this feature is preserved.

The great advantage of a formula is that it prevents political motives from affecting, or even appearing to affect the official projection. The projection of the national unemployment rate next quarter is clearly vulnerable to politics, if left to the discretion of some official group. An Administration in power seems more optimistic about the future of the unemployment rate than the political party out of power. The disparity between their predictions is likely to widen just before an election. Individuals who believe the program ought to expand may tend to forecast a greater rise in unemployment than individuals who believe that the program is not sound. Thus, someone who believes in an active role for the Federal government in treating cyclical unemployment may interpret data differently from someone who feels the Federal government has no business in this field. Confidence in the program may diminish if the public feels that these factors are affecting the official projection. Finally, Congress will probably be averse to giving any agency or commission, however independent, the discretion to in effect decide how much Federal money will be obligated each quarter.

Thus, in spite of its disadvantages, ARP proposes that an automatic formula, rather than discretion, be used to project the future level of unemployment, and thereby decide the amount of ARP funds to be obligated. It will be shown that even a very simple formula would have performed quite well during the most recent business cycle. There is no reason, however, why the ARP formula should not be more complex. Indeed, Congress should delegate to a panel of experts the task of choosing the best forecasting technique available. The best technique may simply be to compute the average of the projections of designated forecasters. Alternatively, a particular formula, or procedure, or model may have the best forecasting record. This panel, or cur-

rent agency, might periodically modify the technique, or select a different one based on some objective criteria concerning its forecasting record.

It is true that even here, politics may try to affect the selection of the technique. Yet here it is likely that objectivity will prevail. First, Congress can explicitly require that the technique be selected according to objective criteria concerning forecasting record. Second, once the technique is chosen, it will operate indefinitely, and its effects in future quarters may be difficult to anticipate. It would be a remarkable politician who could predict whether the Wharton model, or the Data Resources model, would best serve his political interests between now and the next election.

It is instructive to compare this method for determining the amount of funds to be obligated with the method embodied in S. 2993. Under S. 2993, funds would be obligated if either Congress, or the President so ordered, or if the national unemployment rate exceeded 6% for three months. The amount of funds that could be obligated would be limited by the amount of funds that had accumulated in the trust fund. Except for this constraint, the amount of funds to be obligated would be left to the discretion of Congress, or the President, or the Secretary of Labor (when unemployment was above 6%).

While this method is an advance over the annual appropriation under the current PEP program, it has the disadvantage of injecting politics into the program. Either the President, or Congress, would have the freedom to obligate whatever amount they would choose, whenever they would want to do so, provided the amount did not exceed the reserves in the trust fund. Political considerations might well enter to affect both the amounts, and the timing, of the funds released. Congress and the President may compete with each other to claim credit for activating the program, or out-doing the other branch, perhaps prior to an election. If the unemployment rate rose above 6%, the Secretary of Labor would be required to enter as well. It is possible that the freedom to empty the trust fund, by either branch, may dis-

courage the appropriation of funds in the first place. Congress may be reluctant to give the President a large trust fund that he can use to political advantage whenever he desires. Similarly, the President may be reluctant to sign such acts of appropriation, fearing that Congress will release the funds irresponsibly.

The method proposed by ARP leaves no discretion to either branch. The amount of funds to be obligated each quarter will be determined according to the best forecasting methods available. Neither the President, nor Congress, would have the opportunity to use the program for political purposes. The ARP method should therefore help to protect the integrity of the program, and increase public confidence in it.

D. A SUFFICIENT LEVEL OF FUNDING

Another major difference between the Anti-Recession Program and the Public Employment Program is the size of the program. In its first year, PEP directly created about 150,000 jobs, and it is estimated that about another 150,000 were indirectly created through its multiplier effect. PEP is triggered when the unemployment rate exceeds 4.5%. As the unemployment rate rose from 4.5% to 6.0%, unemployment rose by about 1.3 million, over four times the number of jobs generated by PEP. PEP is capable of lowering the unemployment rate only about 0.35 percentage points. Thus, in June 1972 the national unemployment rate was 5.5%. Without the PEP program, unemployment would have been about 5.8% or 5.9%.

These estimates of the multiplier effect of PEP are based on the simulations of the Brookings econometric model by Fromm and Taubman cited earlier. They distinguish the effect of government spending for employment from other kinds of government spending. According to their calculations, the one quarter multiplier of government employment is 1.7. Let us assume, to simplify, that the ratio of employment to output is the same for output directly generated by the initial expenditure, and output indirectly generated by the multiplier. Then, in the first

quarter, roughly seven jobs are generated indirectly for every ten jobs generated directly.

By the end of the second quarter, nine jobs have been indirectly generated for every ten caused by the initial expenditure. During the next eight quarters, the total number of jobs created, directly and indirectly, stays close to double the number caused by the initial spending. Thus, in the first quarter, after 150,000 PEP employees were on the job, PEP was indirectly inducing another 100,000 jobs, for a total impact of 250,000. By the end of the second quarter, however, the indirect effect increased to 150,000, and stayed close to that level for the next six quarters. While some error in these multiplier estimates is likely, the assumption of a multiplier of two should serve as a rough estimate of PEP's impact.

Thus, if the trigger national unemployment rate is 4.5%, it is estimated that PEP closed only about one-fourth of the gap between the unemployment that would have occurred, had there been no PEP program, and the trigger rate.

In contrast, it is proposed that ARP be large enough to close the entire gap between what unemployment would be without it, and the trigger rate. It should be recognized that, because multiplier effects change, from quarter to quarter, a choice must be made. If we want to close the entire gap in a single quarter, then we will close more than the gap by the end of the second quarter, and for the next eight quarters, if the number of jobs directly created is held constant. Since the one quarter multiplier is 1.7, if the gap is 17 jobs, then 10 must be directly created. If this is done, however, then there will be a total of 19 jobs generated by the end of the second quarter, and this will remain close to 20 jobs throughout most of the next eight quarters. The alternative is to bridge most but not all of the gap in the first quarter, and aim to close the entire gap by the end of the second quarter. Thus, if the gap is 20 jobs, create ten directly. This will generate a total of 17 jobs by the end of the first quarter, closing 85% of the gap; and almost all of the remaining 15% will be closed by the end of the second quarter.

Since the multiplier values are fortunately quite constant over the next eight quarters, the program will remain roughly on target from that point on.

It should be stressed that these are admittedly rough estimates. The simulations were done with a single econometric model, with its imperfections, several years ago (The Brookings model project has in fact been discontinued). These estimates are used for the purpose of illustration. If an Anti-Recession Program were enacted, a more thorough analysis of recent empirical results would be required to select multiplier estimates.

In theory, it would be possible to close all of the gap in the first quarter, and then reduce the number of jobs in the second quarter to prevent overshooting. The number of jobs could be varied to achieve the target in each quarter, even in the face of lagged effects. Earlier, however, the one year guarantee was introduced because of the problems that would be caused by frequent decreases in the number of jobs funded. Thus, a trade-off must be faced. If overshooting is not to pervade the program, less than 100% of the gap will have to be closed in the first quarter. Fortunately, according to the Fromm and Taubman estimates, 85% of the gap can be closed in the fist quarter, and vitually 100% in the second quarter, without significant overshooting occurring at any time thereafter.

Suppose that unemployment is projected to rise during the next two quarters. Then it might be optimal to close the entire gap in the first quarter, because the overshooting effect during the following quarter will be exactly what is needed to handle the continuing rise in unemployment. For example, suppose there is a gap of 17 jobs during the first quarter, but a gap of 19 jobs is projected for the second quarter. Then creating 10 jobs at the beginning of the first quarter will be optimal. It will close the entire gap in the first quarter, and will also close the larger gap in the second quarter, since the multiplier increases from 1.7 to 1.9. Of course, if the gap projected in the second quarter is greater than 19, additional jobs can be

can be created at the beginning of the second quarter. Thus, what fraction of the gap should be closed in the first quarter should depend on whether the gap is expected to increase in ensuing quarters.

Whether to attempt to close 100% of the gap in the first or second quarters depends on the consequences of overshooting. These will be examined later. Fortunately, the difference between these two strategies, or an intermediate one - in which between 85% and 100% of the gap is closed in the first quarter - is not large.

E. COMPARISON WITH THE NATIONAL MANPOWER POLICY TASK FORCE RECOMMENDATION

The National Manpower Policy Task Force (Executive Director, Robert Taggart; Chairman, Garth Mangum; Vice Chairman, Sar Levitan; and a distinguished list of experts) has issued a short paper on the Public Employment Program in which they urge modifications of the cyclical aspect of PEP similar to those which are proposed in the Anti-Recession Program described here. The paper is called, Public Employment Policies and Priorities, December 1972. This paper further develops several ideas first suggested in a similar paper in July 1972 on the Public Employment Program. It will be useful to briefly compare the Anti-Recession Program proposed here with the recommendations of the National Manpower Policy Task Force.

The essential thrust is the same. Both proposals urge that the number of public service jobs created vary with the level of unemployment, and that the number of jobs created should be larger than authorized under PEP. In the July paper, the Task Force suggested that the path of unemployment should be projected, so that the number of jobs created would anticipate the path of unemployment over the coming year. This idea is embodied in ARP. In its short paper, this is as far as the Task Force goes on the cyclical aspect of PEP. Thus, while the Anti-Recession Program proposed here is completely consistent with the Task Force's re-

commendations, it develops these ideas into a set of more specific guidelines. It will be worth pointing out several ARP features not stressed, or proposed at all in the Task Force papers.

The Task Force seems to imply that the "trigger" should be genuinely automatic, not requiring any discretionary action by Congress or the President. Yet nowhere does it say this. The current, so-called PEP "trigger" must be transformed into a real trigger. Second, ARP calls for changing the number of jobs every quarter, instead of once a year, as the Task Force implies. While this significantly improves the speed and accuracy of the program, it requires a new feature: the guarantee of funding for one year for each ARP job created, regardless of the path of unemployment. This guarantee is automatic under annual appropriations, but must be specifically added under a quarterly program. Third, the Task Force calls for absorbing a stated proportion of the unemployed above the trigger level. ARP specifies that this proportion should be 100%. ARP allows 20% of Federal funds to be used to expand capacity so that program agents can productively absorb workers. While a proportion less than 100% would be a more cautious way to test capacity, it will be argued that capacity should be sufficient, based on evidence available, to warrant a proportion of 100% (about 50% public service jobs, and 50% generated through the multiplier effect in the private sector). ARP also suggests adding Federal agencies to state and local, to add to capacity.

The essential approach is the same. The Task Force stresses that the experience of the Public Employment Program shows that a more effective counter-cyclical program can be fashioned by retaining the basic design, but expanding the size of the program, and enabling the number of jobs created to vary with the level of unemployment. ARP takes these notions and develops them in greater detail.

F. THE ALLOCATION OF FUNDS TO LOCAL AREAS

Once the total number of jobs to be created nationally is determined, and therefore the total national expenditure for the program (based on $X per job - roughly $7,000 per job in the PEP program), this total must be allocated among local areas. Under PEP, funds were allocated according to the severity of local unemployment. The same concept should be used by ARP.

Specifically, it is proposed that funds be allocated according to the severity of the rise in unemployment above the normal level for the area. This would be computed as follows. Suppose the national trigger rate is 4.5%. Consider the local unemployment rate that prevailed when the national unemployment rate was last at the trigger level. This unemployment rate will be regarded as the base level for the area, solely for the purpose of the program. The objective will then be to allocate funds among local areas in order to restore their unemployment rates to this level, and therefore, the national unemployment rate to its trigger level.

In other words, the objective of ARP will be purely counter-cyclical. No attempt will be made to reduce the dispersion of unemployment rates among areas. When the national unemployment rate is 4.5%, some areas will have rates significantly above 4.5%. ARP will not attempt to alter this. Its aim will be to restore the configuration that existed when the national unemployment rate was last at 4.5%. Of course, ARP will allocate more funds to areas that experience a sharper rise in unemployment above their base level. Thus, the fact that the recession hits some areas harder than others will definitely be taken into account by ARP. The ability to do this is a major advantage of an expenditure instrument over a tax instrument.

An alternative to this more limited counter-cyclical goal would be to try to restore the unemployment rate of each local area to the trigger rate of 4.5%, regardless of its base level of unemployment. Two approaches should be considered. Under the

first, ARP would still be triggered by the national unemployment rate. No funds would be obligated unless the national rate rose above the trigger level. Further, the total funds to be allocated would also be determined by national unemployment. But funds would then be allocated to areas according to the gap between the local unemployment rate and the national trigger rate (say, 4.5%), rather than according to the gap between the local unemployment rate and the "normal" rate - the one that existed when the national rate was last at its trigger level.

This approach would have the effect of treating high unemployment areas better during recession than during non-recession. If the national unemployment rate was 4.3%, below the trigger of 4.5%, then an area with an unemployment rate of 6.0% would receive no assistance. If the national unemployment now rises to 4.6%, this local area would suddenly receive enough funds to move its unemployment rate towards the 4.5% level.

If it is decided to treat structural regional dispersion in unemployment rates, rather than purely cyclical effects, then it makes sense to adopt the second approach. Under it, reference to the national unemployment rate would be abandoned altogether. Each local area would be treated separately. Whenever the local unemployment rate exceeded the trigger rate, for whatever reason, Federal funds would automatically be pumped into the program agents in the area in an amount aimed at reducing unemployment to the trigger level. Treating each area individually would remove the discontinuity in the first approach, where an area might be better during recession than during non-recession. Under this approach, the situation in the rest of the country would be irrelevant.

This more ambitious approach may well have merit, but it raises problems not encountered in the purely counter-cyclical Anti-Recession Program we are proposing. Consider the impact of this approach if the national unemployment rate is initially at the trigger level. Those local areas with unemployment rates above this level will be entitled to funding. If the employment effects of this funding could be confined to the recipient areas,

there would be no problem. But they cannot. Each local area imports a significant fraction of its total output from the rest of the country. Thus, the expenditure in the high unemployment areas will push the unemployment rate in the rest of the country below the trigger level.

In response to this spillover effect, it would be possible for the Federal government to shift its own budget in a restrictive direction, in order to restore the national unemployment rate to the trigger level. Thus, the automatic Federal employment program would even out the dispersion in unemployment rates among local areas, and the Federal budget would neutralize any spillover effects by restoring national unemployment to the trigger level.

This approach would depend on the effectiveness of assigning individual policy instruments to individual policy targets - a classic problem in the theory of economic policy.[7] Here, there are two policy objectives. The first is for each local unemployment rate to be at the same trigger level. The second is for the national unemployment rate to be at the trigger level. The question is whether the automatic Federal employment program can be assigned to the first objective, and the Federal budget be assigned to the second. Assignment means that each instrument pursues only its own objective, and ignores its effects on other objectives.

Two standard issues in the assignment problem are the following: First, does convergence occur? Does the pursuit of individual targets by individual instruments lead to the successful achievement of all targets? Or does it lead to divergence, because each instrument undermines the efforts of the others whenever it ignores its impact on other goals in its pursuit of its own objective?

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7. Hansen [16], Chapter 1.

Second, even if convergence occurs, what is the path to convergence? How much oscillation around the targets occurs before they are finally achieved? How long does overshooting occur, and how large is its magnitude?

Both of these issues require careful analysis in this application. An attempt must be made to measure the magnitude of the spillover effects. When the Federal budget offsets the spillover effect, holding the national unemployment rate at the trigger level, does it also offset most the impact of the automatic Federal employment program in the high unemployment areas? If so, then the automatic Federal employment program will be largely frustrated, or at least take a long time to reach its objective. Whenever it reduces unemployment, the shift in the Federal budget to restore the national rate may unwittingly raise unemployment in those high unemployment areas, seriously undermining the impact of the automatic program.

Even if convergence will eventually occur, the path may involve large overshooting. Suppose the Federal budget, depending as it does on discretionary action of a political legislature, does not respond reliably to the spillover effects of the program. The earlier discussion of the weaknesses of discretionary instruments certainly applies here. If the response lags, the automatic program may contribute to inflationary pressure.

This problem does not arise in the Anti-Recession Program as proposed here. When funding is determined by movements in the national unemployment rate, and allocated according to cyclical increases above the normal local level, then there is no danger of spillovers contributing to inflationary pressure. Of course spillovers still exist. The difference is that under the purely counter-cyclical ARP, funds are not obligated unless the national unemployment rate is above the trigger level, and spillovers are therefore welcome. If funds are obligated solely according to local unemployment rates, then spillovers may well occur when they are unwelcome - when the national unemployment is at or even below the trigger level.

The spillover problem does not mean that the more ambitious program should not be attempted. Analysis of the effects of such a program, however, is a complex undertaking; and yet is essential, in order to estimate the seriousness of the spillover problem.

There is a second difference between the purely counter-cyclical program, and a program that would encompass long-term regional dispersion as well. This difference is much simpler to analyze. The issue is simply whether redistribution from low unemployment areas to high unemployment areas should be undertaken. The Anti-Recession Program as proposed does not attempt such a redistribution. Virtually all areas will receive assistance, in proportion to the effects of the recession on the area. Virtually all areas stand to benefit from such a program when the national unemployment rate rises. If the automatic program tries to reduce the unemployment rate in all areas to the same trigger level, then a disproportionate share of the benefits will be received by areas with normally high unemployment rates. Indeed, low unemployment areas will receive no aid, but the taxes of its residents will help to finance the redistribution.

One may or may not feel that such redistribution is desirable. But it is certainly true that such a program would have greater difficulty passing Congress than a purely counter-cyclical automatic program. It may further be argued that there is no strong reason why regional redistribution, if it is to occur, must occur through an automatic program. The basic reason for an automatic instrument is to respond to rapid changes in the economy - to a cyclical downturn. Dispersion of unemployment rates among areas is a long-term problem. An area does not switch rapidly from being a high unemployment area to being a low unemployment area. Thus, this problem might be adequately handled through a discretionary, rather than an automatic program.

In summary, it seems prudent to begin with the purely

counter-cyclical Anti-Recession Program proposed here. If such a program proves successful, then a more ambitious program which also attacks long-term area dispersion might be attempted.

In order to allocate funds to areas according to the rise in the local unemployment rate above the base level, official estimates of local unemployment rates must be made. It should be realized that the monthly Current Population Survey, which generates the official data for the national unemployment rate, does not do so for local areas. The reason is that the sample is simply not large enough to make reliable estimates, even for areas as large as most states.[8] Evidently, the cost of expanding the CPS sample to a size that would yield reliable estimates for areas the size of a large urban area would be quite large.[9]

To cope with this problem, the current Public Employment Program used data from the 1970 Census, which did measure local unemployment rates, combined with data collected by state unemployment insurance systems.[10] Methods are currently being developed within the Manpower Administration, to improve these techniques. It seems likely that given the costs of expanding the CPS, the Anti-Recession Program, like PEP, will have to rely on monthly data from local unemployment insurance offices, adjusted in light of the 1970 Census.

The basic idea is this. We can compare the figures collected by local unemployment insurance programs in the week in 1970 when the Census performed their more comprehensive survey of local unemployment. By comparing the unemployment insurance

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8. U.S. Bureau of Labor Statistics [41].

9. Based on a conversation with the staff of the Regional Manpower Administration, San Francisco, California.

10. Based on a conversation with the staff of the Regional Manpower Administration, San Francisco California.

data with the Census data, it should be possible to detect biases and systematic inaccuracies in the unemployment insurance data. Thus, the monthly unemployment insurance data can be adjusted, to improve the monthly estimate of local unemployment.[11]

While data generated by the unemployment insurance programs cannot compare in reliability with CPS data - the latter being generated by sound sampling techniques, rather than as the by-product of an insurance program - it will probably capture major variations in unemployment among areas. Every effort should be made to improve the estimates by pooling Census data, and CPS data, with data from the unemployment insurance system.[12]

Once the level of funding for a specific political jurisdiction is calculated, there remains the matter of allocating the funds among the several public program agents in the jurisdiction. It seems sensible to follow the method used by PEP. Under PEP, state and local governmental units in each district received funds in proportion to their share of public employment in the jurisdiction. Under PEP, the Federal government dealt directly only with larger governmental units. Special units, such as school districts, port authorities, and so on, were subagents to the larger units in the district, and received their share of funds through those units.

PEP excluded Federal agencies from the program. Yet there seems no strong reason for such exclusion. Furthermore, because ARP is a larger program, and the capacity of program agents to rapidly create the required number of jobs is a concern, it seems useful to include Federal agencies, in order to reduce the burden on other governmental units.

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11. U.S. Manpower Administration [50].

12. U.S. Manpower Administration [50].

G. OTHER FEATURES OF ARP

The provisions in PEP designed to assure a fair allocation of jobs among various labor force groups, particularly the disadvantaged, should be incorporated into ARP. Like PEP, ARP should try to spead the jobs around, providing employment for unemployed persons of various skill levels, and personal characteristics.

Each program agent should be required to assist ARP employees, towards the end of their year of employment, in securing a regular public or private sector job, if the trend in both national and local unemployment indicates that funding for that job may be cut at the end of the year. It should be stressed that any ARP employee will be allowed to remain in the same ARP slot, or a different ARP slot, indefinitely, as long as the slot is funded, provided the employer chooses to retain the individual. The program agent should be required to inform the employee in advance whether he expects to be able to retain him, and if not, to provide placement assistance. If the level of unemployment has not subsided, it is likely that ARP funding will continue, and the employee can be retained. ARP employees will only have to seek new jobs if the local unemployment rate has fallen, thus improving the prospects for finding a regular job.

All ARP employees will be required to register with the local Employment Service. The Employment Service will be charged with the responsibility of trying to place these individuals with regular employers in permanent positions. The Service will keep a record of when the job of each ARP individual is expected to terminate. If the individual changes ARP jobs with the program agent, he will be required (or the program agent in his behalf) to report this to the Employment Service. The Service will give first priority to individuals whose ARP jobs are expected to terminate shortly. In this way, it should be possible to minimize the number of individuals who are thrown back into unemployment at the end of one year in ARP. It should be remembered that if

the economy has not picked up, it is likely that the ARP job will be renewed. If the individual performs his job well, his employer will probably try to retain him, even if this means shifting him into another ARP job, or regular employment with the agent. This will provide an incentive for the individual to take his ARP job seriously, especially during the final months of the year.

Under PEP, the program agents are required to match the Federal contribution by providing 10% of the total funds for the program.[13] This can be provided in kind, rather than cash, and this is often the case. Program agents are prevented from spending any Federal funds on supplies, equipment, other inputs, space, etc.. 90% of the funds must go to wages and salaries of ARP employees, and the remaining 10% can be divided between administration and training. The matching requirement serves little purpose, and is hardly a constraint in practice. It is proposed under ARP that it be eliminated, and that the Federal government provide 100% of the funds. Since the program is considerably larger than PEP, it is essential that program agents not face shortages of space, equipment, and so on, which are necessary to the useful employment of ARP employees. It is proposed that program agents be allowed to spend up to, say, 20% of ARP funds on supplies, equipment, space, and so on, which directly facilitate the useful employment of ARP employees. This figure is tentative, and may well need to be adjusted, based on experience with the program.

Program agents should be advised not to make ARP jobs which are created in April dependent on ARP jobs created in January, October, or July, as a general rule, unless the program agent is confident that unemployment will be high enough to continue ARP funding. Otherwise, when non-April jobs complete one year,

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13. See Footnote 15, Chapter 1, Part I, p. 32.

they may not be renewed. If April jobs are closely integrated with other ARP jobs, they will no longer be as productive if the others are not renewed. For example, if jobs created in two different quarters are bound up in the same project, the project will be interrupted if some of the jobs are cancelled, unless the local government funds them from its own resources. If this simple guideline is followed, the phasing out of ARP jobs as unemployment subsides will produce minimum difficulties.

Under PEP, civil service requirements were waived, and temporary slots were created. This should be encouraged under ARP for two reasons. First, although ARP is not especially aimed at the problems of the disadvantaged, it should assist all segments of the unemployed, including the disadvantaged. It is well known that such persons have difficulty passing civil service exams, although they may be able to perform some public service jobs adequately. Second, there is often a long waiting list for civil service jobs. The purpose of ARP is to provide short-term employment for persons who have been laid off in all sectors of the economy. Such persons will usually not have passed civil service exams, or be on the waiting list. If civil service requirements are not waived, ARP will only be able to help those who previously took the exam and got on the list, instead of being able to help all segments of the unemployed.

H. THE CAPACITY TO RAPIDLY CREATE PRODUCTIVE JOBS

A major issue is whether public program agents can handle a program that is roughly four times as large as the current Public Employment Program, and in which the funding level is changed every quarter. A starting point is to look at the performance of PEP.

The experience of the Public Employment Progeam in its first year shows what can be done, when the program is at a size of 150,000 jobs, even when the program comes as a surprise, allowing no planning on the part of the program agents, and the agents first have to learn the basic procedures of the program.

Levitan and Taggart, in their Interim Assessment of PEP for the Senate Subcommittee on Employment, Manpower and Poverty, write the following:

> In the first five months of the program, 100,000 persons were put to work - no mean feat . . . Thus, in comparison with almost all other programs, the administrative decisions and actions under EEA (PEP) took place with unprecedented speed.[14]

It should be stressed that even this pace was significantly slowed down because of several factors that would be eliminated once the program was operating for some time. The guidelines had to be written from scratch, then explained to regional project officers in the Manpower Administration, who in turn explained them to program agents. Program agents - many caught by surprise - had to first put together a grant application, and prepare a list of jobs. Once ARP is firmly established, and all parties are accustomed to its procedures, the major causes of delay will be gone.

The potential speed of ARP can be understood by realizing how public program agents put together their grant applications for PEP. Most program agents simply listed those jobs that were requested by department heads in the previous budget session, but could not be funded. Once ARP has become a permanent program, it will become routine for program agents to keep an inventory of jobs ready to be filled if ARP funds become available.

Concrete understanding of how the PEP job lists were prepared by program agents counters the notion that "make-work" jobs were created. PEP jobs were exactly the same as regular jobs, with perhaps special emphasis on entry-level jobs. Many of the exact jobs funded by PEP would have been funded by the program agents if there were no recession, and their revenues had therefore been larger. If the program agents had funded

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14. Levitan and Taggart [23], 1972, p. 17.

the jobs themselves, few would have considered the jobs "make-work." A shift to Federal funding, because of recession, clearly does not convert useful work into make-work.

In their "Evaluation of the First 18 Months of the Public Employment Program," Levitan and Taggart address the make-work issue. They conclude as follows:

> In summary, PEP jobs are probably as "real" as any other state and local employment in the sense that participants are assigned tasks, supervised, and equipped. The occupations are familiar, although concentrated disproportionately in the entry level. Though the public service area distribution is skewed towards the public works and transportation which could be implemented and phased out quickly, most of the jobs were either requested, planned, or slated for future funding.[15]

The Anti-Recession Program, like PEP, does not attempt a major increase in the size of the public sector relative to the private sector. Some would argue that such a shift would improve allocative efficiency in the economy. Others would claim the reverse was true, and the result would be make-work in the public sector. Whichever view is correct, it should be recognized that this issue is irrelevant for evaluating ARP. ARP makes the size of the public sector only somewhat larger than the level it would have achieved had there been no recession, and the revenues of state and local government were therefore higher. Indirectly, through its multiplier effect, ARP increases output and employment in the private sector as well. Furthermore, ARP lasts only as long as the recession. It does not cause a permanent shift in resources between sectors; rather, it causes resources that would have been idle to be productively utilized in both public and (through the multiplier effect) private sectors.

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15. See Footnote 15, Chapter 1, Part I, p. 32.

This limited function of countering recession means that still another contention sometimes advanced can be dismissed easily. That contention is that citizens are already satiated with public services, and little value can be derived from further production. If the public services would have been produced, had there been no recession, saturation will not suddenly occur because there is recession. As Levitan and Taggart observe:

> There is no evidence of saturation in state and local employment. Growth has not come from more persons performing the same functions with diminishing returns, but from increasing and altering requirments caused by urbanization, rising service demands, and other factors. It is simply impossible to say that any given number of employees per capita delivering a particular service is adequate, and that additional jobs would be "make-work."[16]

Another mistaken basis for concern about make-work is the false assumption that the program is geared for the highly disadvantaged. If it is imagined that the unemployed are primarily persons with no skill, and perhaps psychological obstacles to work, then concern about make-work would be legitimate. While ARP includes the disadvantaged, it is not primarily aimed at that group. The majority of the unemployed who will receive ARP jobs are persons who have been laid off their regular job because of the cyclical downturn. ARP funds can be used to create highly skilled jobs as well as jobs requiring less skill. Since most ARP employees will be persons who just lost regular private or public sector jobs, there is little basis for questioning the ability of ARP workers to perform useful work.

The major constraint on ARP jobs is that they must require relatively little in the way of complementary expenses. Under

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16. See Footnote 15, Chapter 1, Part I , p. 32.

the current PEP program, Federal funds could not be used for such complementary inputs. Yet over 150,000 jobs were created. Since ARP will be larger in scale, it is essential that some Federal funds be available for such expenses. It is tentatively proposed that up to 20% of all ARP funds be available for expenses directly related to the productive employment of ARP employees. Experience with the program will tell whether this percentage is proper. This provision should give the added flexibility that will expand the job creating capacity of program agents.

While ARP moved rapidly, even in its first year, it operated at about one-fourth the level envisioned for the Anti-Recession Program. Can ARP handle the larger number of persons and absorb them as rapidly as ARP requires? While the best way to answer this question is to test the program, a variety of evidence suggests strongly that program agents will be able to create productive jobs at the pace required, once they have mastered the regulations, and acquired some experience with the program.

Under PEP, 150,000 jobs were created. In 1971, state and local employment was 10.188 million.[17] Thus, PEP involved an average expansion of 1.5% for program agents. The actual growth history of state and local government provides some information on the minimum capacity of these agents to absorb individuals into employment. The actual growth, it must be emphasized, shows what state and local units can do under the constraint that they finance the jobs themselves - an obviously severe constraint. There is no reason to assume that the constraint on actual growth was the capacity of these agents to put people to work, rather than revenue limitations. Thus, the data show the minimum of which they are capable.

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17. U.S. President [52], 1972, Table B-27, p. 226.

From 1965 to 1966, state and local government employment grew from 7.696 million to 8.227 million in a period of economic expansion, an increase of 531,000, or 7% of total state and local employment.[18] In a slower period from 1970 to 1971, employment increased by 3.5% in state and local government. At the rate achieved between 1965 and 1966, state and local governments in 1971 could have absorbed an increase of 700,000 jobs, or about 350,000 more than the actual increase between 1970 and 1971 that they financed themselves. Thus, at a very minimum, state and local governments in 1971 could have absorbed at least 350,000 ARP jobs, more than double the number funded by PEP.

While the stock of ARP jobs will probably be about four times as large as the 150,000 jobs under PEP, it should be realized that this stock will not be added all at once. In Appendix A, which shows how ARP would have performed in the 1970 recession, the number of ARP jobs that would have been added in any single quarter did not exceed 373,000.[19] Since the limitation is probably the size of the flow that must be absorbed in a given period of time, rather than the stock level, the gap between ARP and past experience is not that wide.

The past record of state and local governments is reinforced by their response to PEP. None complained that it was having difficulty finding jobs to fund. Many program agents had great difficulty selecting their job list for their PEP application, since the requests of department heads well exceeded their allotment under PEP. Given these observations, it is doubtful that program agents would have difficulty creating at least 373,000 jobs in any one quarter, and in carrying at least 792,000

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18. U.S. President [52], 1972, Table B-27, p. 226.

19. See Appendix A, Table A-2, column 2.

jobs (the maximum stock of ARP jobs at any point in time had ARP been operating during the 1970 recession) at any point in time.

There is also little doubt that there would be no difficulty finding applicants for jobs. Many program agents found that the number of job-seekers substantially exceeded the number of PEP slots available.

While there is evidence that program agents have the capacity to create enough jobs to close the entire gap between actual unemployment and the trigger level, proof is not available in advance. Doubt about capacity is one argument for a smaller program. Another is simply the unwillingness of Congress to spend roughly four times as much money as they spent on PEP (roughly $4 billion per year). If either of these concerns is important, a more cautious approach is possible.

The key feature of ARP is the automatic obligation of funds, not the closing of the entire gap. It would be possible to automatically obligate funds in an amount designed to close only a fraction of the gap. Such a compromise would be possible. This might enable the principle of automatic obligation of funds to be tested on a smaller scale. If it proved successful, there would always be the option of expanding the program, so that it was designed to close the entire gap.

While such an approach is possible, it is probably not needed. Once program agents become accustomed to ARP, and plan for it, there is no reason why they will not be able to keep an inventory of jobs ready to go into effect upon an announcement that new ARP jobs are available. Thus, while proof will come only with the implementing of the program, it seems certain that program agents will have the capacity, once they get used to the program, to rapidly create enough useful jobs to close the entire gap. It should be remembered that caution is not costless. A smaller program will mean higher unemployment and lower output during the next recession. The costs and benefits of the cautious approach must therefore be carefully weighed.

Chapter 3

HOW ARP WOULD HAVE PERFORMED IN THE MOST RECENT CYCLE

It is instructive to see how the Anti-Recession Program would have performed during the cycle that began at the end of 1969. It is essential to observe not only the effect of ARP during the downswing, but also its effect during the upswing, since it is during the upswing that the one year guarantee generates a lagged response which has some tendency to increase the demand for labor above the desired level. If there were no one year guarantee, ARP could be phased out as quickly as the upswing created new jobs. The constraint introduced by the one year guarantee must be examined by looking at the upswing.

Appendix A describes the method of computing the effect of ARP in detail. Here, the important assumptions underlying that calculation, and the results, will be given.

First, a formula must be chosen to project the level of unemployment three months hence. The number of ARP jobs created at the beginning of a quarter will attempt, in general, to close the gap that is expected to exist at the end of the quarter. If ARP is actually instituted, it is proposed that the best forecasting methods available be used to predict unemployment three months ahead. It would be inefficient to use a simple formula, when more complex models of the economy can offer more reliable fo ecasts. Nevertheless, in Appendix A, a relatively simple formula was used. Such a formula should not do as well as a more sophisticated forecast. These results, therefore, should understate ARP's ability to keep the national unemployment near the trigger rate in the face of falling aggregate demand.

The formula used in Appendix A is the following:

(1) If the number of unemployed persons is greater than it was three months earlier, then:

   (a) If the unemployment rate is less than 5.5%, expect next quarter's change in the number of unemployed persons to equal last quarter's change.

   (b) If the unemployment rate is greater than or equal to 5.5%, expect next quarter's change in the number of unemployed persons to equal one-half of last quarter's change.

(2) If the number of unemployed persons is less than it was three months earlier, then expect next quarter's change in the number of unemployed persons to equal last quarter's change.

The rationale for this formula is the following. In the downswing, unemployment tends to rise rapidly at first. Eventually, the rate of increases slows, and unemployment levels off at some peak. Where this occurs depends on a variety of factors. In a simple formula, which does not include these factors explicitly, it is necessary to choose a point where this slowdown is likely to occur. For the purposes of Appendix A, 5.5% is chosen. It is important that ARP respond quickly and strongly during the initial downswing, and then ease up as the downswing slows, to prevent overshooting. As soon as the upswing begins, it is essential that ARP try to phase itself out rapidly, so as not to contribute to inflationary pressure. This formula is a crude attempt to incorporate these objectives. Its performance will surely understate the performance of ARP under the guidance of more sophisticated forecasting methods.

Suppose the formula forecasts an increase in the level of unemployment. A choice must be made. Should the level of ARP jobs be set so that the gap will be closed in one quarter? Or should the goal be to close the gap eventually, as the lagged multiplier approaches its equilibrium value? Earlier, it was seen that, fortunately, according to Fromm and Taubman's estimates using the Brookings Model, the difference between these two approaches is not great. The one quarter multiplier is about 85% of the longer term, equilibrium, static multiplier. At the beginning of the downswing, it makes sense to close 100% of the gap in the first quarter. Overshooting in the second quarter

is unlikely to be a problem, since unemployment is likely to rise further, requiring an increase in the desired stock of ARP jobs in the second quarter. On the other hand, if unemployment is expected to level off, then overshooting becomes a problem, and the static multiplier should be used as a guide.

When ARP is actually implemented, the difference between the one quarter multiplier, and the static multiplier, should be built into the formula determining the number of ARP jobs created. For the purpose of the calculation in Appendix A, however, such a distinction would greatly complicate the calculation. The effect of each job created would vary from quarter to quarter. To simplify the calculation, a multiplier of 2.0 is used throughout, and it is assumed that the one quarter multiplier is the same as the equilibrium, static multiplier.

It must be emphasized that this does not distort the unemployment rates during the downswing, as presented below. As long as ARP creates the number of jobs needed to close the gap in one quarter, the results will be as presented. The effect of the simplification is not to alter the unemployment rates, but rather, to alter the number of ARP jobs needed to achieve them.

For example, suppose the gap expected three months hence is 500,000 jobs. In practice, ARP will attempt to close the entire gap, and Appendix A will also assume that the entire gap is closed in one quarter. The only effect of the multiplier simplification is that Appendix A will assume that only 250,000 ARP jobs must be created, while in reality, roughly 300,000 will need to be created. The simplification will cause Appendix A to underestimate the number of ARP jobs that must be created. But the estimate of unemployment at the end of the quarter will not be affected. Appendix A will be inaccurate in assuming that 250,000, instead of 300,000 ARP jobs were created. But it will correctly assume that a total of 500,000 are induced by the end of the quarter.

Appendix A will therefore understate the number of ARP jobs created early in the downswing. It will also overstate the

number created at the end of the downswing, since the lagged effects of ARP jobs created earlier will reduce the number needed at the end of the downswing.

During the upswing, the major constraint is the inability to terminate ARP jobs until they have been funded for a full year. Since Appendix A understates the number of ARP jobs created early in the downswing, it will underst te the number of ARP jobs that have been funded at least one year, and therefore, will understate the number of ARP jobs that can be terminated. Thus, Appendix A will understate the speed with which ARP is phased out during the upswing. The unemployment rates for the upswing computed in Appendix A may be further from the trigger rate than would actually occur.

In summary, the unemployment rates presented below, as calculated in Appendix A, in spite of the multiplier simplification, should be the rates that would actually be achieved by ARP, with the qualification that the rates presented below during the upswing may not be as close to the trigger rate of 4.5% as ARP would actually have achieved.

Appendix A assumes that the entire expected gap is successfully closed, if doing so requires an increase in the stock of ARP jobs. If closing the gap requires a decrease in the stock, then Appendix A takes into account the effect of the one year guarantee. If the desired decrease in the stock of ARP jobs cannot occur, because of the guarantee, then the unemployment rate is computed in light of this constraint.

In all aspects of this process, the national unemployment rate is seasonally adjusted. Since jobs created by ARP, particularly those created through the multiplier, are not all created immediately, it would not make sense to try to follow the path of actual unemployment. By the time the individuals are hired, the seasonal effect is likely to have changed. Since ARP jobs are guaranteed for one year, they cannot cope adequately with seasonal fluctuations.

Given these assumptions and simplifications, Table 8 presents the results of the calculation in Appendix A. It will

Table 6

THE EFFECT OF THE ANTI-RECESSION PROGRAM IN THE 1970 RECESSION

	1	2	3	4	5	6
	Actual Unemployment Rates	Rates Without PEP or ARP	ARP with 4.5% Trigger	Hypothetical Upswing without PEP or ARP	ARP in Hypothetical Upswing with 4.5% Trigger	ARP in Hypothetical Upswing with 5.0% Trigger
Dec. 1969	3.4	3.4	3.4			3.4
Mar. 1970	4.4	4.4	4.4			4.4
Jun. 1970	4.8	4.8	3.9			4.4
Sep. 1970	5.4	5.4	4.5			5.0
Dec. 1970	6.1	6.1	4.5			5.0
Mar. 1971	6.0	6.0	4.1			4.6
June 1971	5.8	5.8	4.3			4.8
Sep. 1971	6.0	6.0	4.5			5.0
Dec. 1971	6.0	6.0	4.2			4.9
Mar. 1972	5.9	6.1	4.5			5.0
June 1972	5.5	5.8	4.2			4.7
Sep. 1972	5.5	5.9	4.3			4.8
Dec. 1972	5.1	5.4	4.0	5.3	3.9	4.4
Mar. 1973	5.0	5.3	4.0	5.0	4.5	4.4
June 1973	4.8	5.1	4.3	4.8	4.0	4.2
Sep. 1973	4.8	5.1	4.3	4.5	3.7	4.5
Dec. 1973				4.3	4.3	4.3

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be useful to consider each of the six columns in turn.

Column 1 shows the actual unemployment rates in each month. It is important to realize that the actual unemployment rate, beginning in March 1972, includes the effect of the Public Employment Program. Since the Anti-Recession Program will replace the Public Employment Program, it is important to see what unemployment would have been had there been no Public Employment Program. This is shown in Column 2. The rates in Column 2 are the same as in Column 1 until March 1972, when PEP's impact was first felt. It was estimated earlier that without PEP, the unemployment rate would have been about .35 percentage points higher. Since the full impact of PEP was not felt until June 1972, it is assumed that PEP reduced the unemployment rate 0.2 in March, and 0.3 thereafter. Thus, the rates without PEP, shown in Column 2, are 0.2 higher in March, and 0.3 higher thereafter. Column 2 shows the path the economy would have followed had Congress not passed the Emergency Employment Act in July 1971, authorizing the Public Employment Program, the impact of which began to be felt by March 1972.

Column 3 shows the path the economy would have followed had the Anti-Recession Program been in effect with a trigger rate of 4.5%. ARP would have prevented the unemployment rate from ever exceeding 4.5%. At the same time, except for June 1970 when the unemployment rate would have been 3.9%, ARP did not significantly overshoot its trigger. (The 3.9% rate occurred because the increase in unemployment between December 1969 and March 1970 - from 3.4% to 4.4% - was much larger than the increase in the following quarter, to 4.8% in June 1970. Thus, under this simple rule, ARP over-reacted.) The unemployment rate would have been above 4.0% at all times, usually closer to 4.5%. This is particularly true during the upswing. ARP phases out rapidly enough to prevent the unemployment rate from falling below 4.0%.

Since the actual upswing was quite gradual, Column 4 gives hypothetical rates for a more rapid upswing, beginning in December 1972. Since these rates show what would have happened with-

out PEP as well as without ARP, they should be compared with Column 2, rather than Column 1. Column 5 shows the effect of ARP, with a 4.5% trigger, during the hypothetical rapid upswing. It shows that, with a trigger of 4.5%, ARP would not have phased out rapidly enough to prevent the unemployment rate from falling below 4.0% twice, once to 3.7%. It is possible that in a very rapid upswing, ARP with a 4.5% trigger might contribute somewhat to inflationary pressure.

Column 6 shows the impact of ARP with a trigger of 5.0%. The higher trigger means that ARP will allow the unemployment rate to reach higher levels during the downswing. It should be noted, however, that the unemployment rate never exceeds 5.0%, just as the rate never exceeded 4.5% under the 4.5% trigger. The higher trigger enables ARP to have no difficulty phasing itself out, even during the hypothetical rapid upswing. During that upswing, unemployment never falls below 4.2%.

Earlier, a brief review of current research on the relationship between inflation and unemployment was given. In light of that research, the following conclusions can be drawn concerning the choice of the ARP trigger rate. If ARP had been operating during the actual 1973 upswing, with a trigger of 4.5%, it would have phased out rapidly enough to avoid seriously contributing to inflationary pressure, since the unemployment would at no point have been pushed below 4.0%. On the other hand, if a more rapid upswing had occurred, then under the 4.5% trigger ARP might have added significantly to inflationary pressures by twice pushing the unemployment rate below 4.0%. If the trigger were set at 5.0%, then even if the upswing had been rapid, ARP would probably have contributed little to inflationary pressure, since unemployment would at no point have been pushed below 4.2%.

While the higher trigger offers protection against a rapid upswing, it should be stressed that the 4.5% trigger would not have added much to inflationary pressures during the actual upswing that occurred. The benefits of the higher trigger must be weighed against the costs. Under the higher trigger, unemployment is higher, and output lower, than under the lower trig-

Table 7

GROSS COST OF ARP

1970	$2.5 billion
1971	$5.0 billion
1972	$4.8 billion
1973	$2.9 billion
Total	$15.2 billion
Annual Average	$3.8 billion

Chapter 4

THE COSTS AND BENEFITS OF ARP

A. THE COST TO GOVERNMENT

Table 9 shows the gross cost ARP would have incurred during this most recent cycle, if the ARP trigger were 4.5%, and each ARP job cost $600 per month (roughly the cost per month under the Public Employment Program).

The net cost to government, however, is considerably less than this. There are two primary offsets. First, ARP jobholders, and those who obtain non-ARP jobs through the multiplier effect, pay taxes on their earnings. Thus, part of the gross expense of ARP comes directly back to government in the form of taxes. Second, a significant fraction of those who obtain ARP jobs, or jobs generated by the ARP multiplier, would have been collecting unemployment compensation, or public assistance, if there were no ARP program. Thus, ARP generates savings in unemployment compensation and public assistance. No attempt will be made to estimate either of these two offsets precisely, but it will be possible to make a rough estimate that will convey the importance of these factors.

Consider first the effect of taxes. Assume that 80% of the gross cost of ARP goes for wages and salaries. This is a minimum, since program agents are allowed to spend a maximum of 20% on other expenses. Out of this 80%, approximately 20% will be returned to the government by ARP employees in the form of Federal income tax, social security payroll tax, and possibly state income tax.[1] When ARP employees spend their income, they

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1. U.S. President [52], 1972, Table B-66, p. 273.

ger. The calculations indicate that however this trade-off is weighed, the trigger should be set somewhere between 4.5% and 5.0%, given the current structure of the economy. If policies are adopted that should improve the unemployment-inflation relationship - such as manpower and employment programs for the disadvantaged, or an increase in competition in the economy - then it might be possible to set the trigger rate still lower.

induce the hiring of additional workers in non-ARP jobs. These persons, like ARP employees, pay taxes they would not have paid without ARP. This process also increases business sales and profits, and therefore generates additional government revenue in the form of sales tax and corporation income tax revenue. Given a multiplier of about two, assume that total taxes generated is about twice the amount paid by ARP employees. Since ARP employees pay taxes equal to about one-sixth of the gross cost, total taxes come to about one-third of the gross cost of the program.

Only the savings in unemployment compensation will be estimated. Since there will be some savings in public assistance, this figure will understate the total savings from both of these programs. The average weekly benefit under unemployment compensation was about $50 in 1970, and about $55 in 1971.[2] It will be assumed that the benefit is $60 in 1972 and $65 in 1973. A reasonable assumption is that 50% of all ARP employees, and individuals who obtain jobs generated by ARP would have been receiving unemployment compensation. This assumption is supported by the fact that, at any point in time in 1971, on the average, 1.8 million persons were receiving benefits out of about 4.1 million who were unemployed. About 40% of the unemployed were receiving benefits. Since ARP allows program agents to hire the most qualified persons available, and these are likely to be those who have earned unemployment compensation, it is reasonable to raise the figure to 50%.

Actually, the figure is likely to be still higher, because under ARP, the Employment Service will be charged with offering ARP jobs, when available, to all unemployed persons who file claims for unemployment compensation. To receive unemployment compensation, an individual must be available for work, and

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2. U.S. President [52], 1972, Table B-26, p. 225.

willing to accept a suitable job. The Employment Service will attempt to place benefit recipients in ARP vacancies, whenever they become available. Failure to accept a suitable ARP job without good cause will result in cancellation of benefits. Because of this administrative procedure, it is possible that a still higher percentage of all ARP employees would have received unemployment compensation. Since the figure for ARP employees might be above 50%, but those who get non-ARP jobs might be lower, the calculation will assume, for simplicity, that 50% of all workers who leave unemployment because of ARP would have received benefits.

Since benefits per person are about a third of the ARP cost per job, and half of the ARP employees were earning benefits, then the savings from ARP employees who were earning unemployment compensation is about one-sixth of the gross cost of ARP. But this must be doubled for the savings from persons who get non-ARP jobs that were induced by ARP through the multiplier. Thus, the total savings is about one-third of the gross cost of ARP, roughly the same as the increase in taxes. Thus, the net cost of the program is only about one-third of the gross cost, as Table 10 shows.

Thus, while the average annual gross cost of ARP is $3.8 billion, the average annual net cost is only $1.1 billion. It should be emphasized that these are very rough estimates, but they do suggest the order of magnitude of the cost of the program. The above calculation shows that it is essential to consider the taxes collected and savings from unemployment compensation and public assistance to arrive at the true cost to government of the program. These two factors reduce the net cost very significantly.

The effects on the different levels of government should be noted. While the Federal government pays the full gross cost of ARP, it gains only from Federal taxes, and savings in its spending on public assistance. State governments, excluding the trust funds, gain from increased taxes. The unemployment compensation trust funds gain from reduced expenditure. While

Table 8

NET COST OF ARP

($ billions)	1970	1971	1972	1973	Total	Annual Average
Gross cost	$2.5	$5.0	$4.8	$2.9	$15.2	$3.8
Minus taxes collected	$0.8	$1.7	$1.6	$0.9	$ 5.1	$1.3
Minus savings from Unemployment compensation	$0.8	$1.8	$2.0	$1.1	$ 5.7	$1.4
NET COST	$0.9	$1.5	$1.2	$0.9	$ 4.4	$1.1

this may at first cause a surplus, it will eventually result in lower payroll taxes on businesses - the source of revenue for the trust funds. Since economists usually assume that this tax, although legally paid by employers, is borne by employees, or in part by consumers, these gains should eventually accrue to the public at large.

B. COSTS AND BENEFITS TO THE REST OF SOCIETY

It is probable that the rest of society, excluding the ARP employees, will receive a net gain from the program. The rest of society must pay an annual average of $1.1 billion to finance the program. If the value of the output produced by ARP employees that is available to the rest of society exceeds $1.1 billion, then the rest of society gains.

This is likely to be the case. Regular employees, public or private, must in general contribute at least as much output as they are paid, or they would not be hired. Thus, while we cannot directly measure th value of public sector output, it is usually assumed that the value of such output is measure by the cost of inputs. In particular, the wage of a regular public sector employee should reflect the value of his contribution to output.

Under this assumption, it is almost certain that ARP employees will make at least $1.1 billion of output available to the rest of society. The gross cost of the program, $3.8 billion, would reflect the value of the output contributed. Since ARP jobs are temporary, and are not the result of demand by the taxpayers who will benefit from their services, the level of pay may overstate the value of output they contribute. Given the similarity of ARP jobs, and workers, to regular jobs and workers in the public sector; and given the one year guarantee and its consequences, it seems unlikely that the value of output that costs $3.8 billion would be less than $1.1 billion.

The rest of society should therefore receive more additional output than they sacrifice to finance the program. Thus, ARP

should not be considered a redistributive program. The rest of society should be a net gainer.

C. COST AND BENEFITS TO THE WHOLE SOCIETY: THE ECONOMIC EFFICIENCY OF ARP

The economic efficiency of a program depends on whether it increases the value of total output, however distributed. The Anti-Recession Program is clearly economically efficient. Unemployed persons are put to work, thus increasing total output. The only offset to this is that the "leisure" of the unemployed is reduced. If this leisure is assumed to have a value comparable to the output produced, then it would follow that the gain in output is offset by the loss of leisure, and the economic efficiency of the program would be uncertain.

The "leisure" of the unemployed should not be assumed to have such value. Indeed, it has been argued that for most of the unemployed, such leisure has negative value. Concretely, this means that many of the unemployed might be willing to pay, rather than themselves have to receive payment, in order to give up the leisure of unemployment. Surely, the condition of unemployment, especially to heads of households, involves insecurity, loss of pride, and so on. Such "leisure" is readily given up. Even if some positive value is attached to it, it will not be large enough to offset the value of the output produced.

Thus, it should be recognized that the Anti-Recession Program is economically efficient. The benefits of increased output greatly exceed the costs of foregone leisure. The program would be readily justified by cost-benefit criteria.

APPENDIX

This Appendix will describe in detail how the estimates for ARP's effect on the most recent cycle were arrived at. The unemployment rates that would have occurred had ARP been in effect between 1970 and 1973 were given in Table 8 of the text. Here, the calculations behind those results will be given.

Each quarter, ARP must use some method to project what unemployment will be three months hence, in order to determine the number of ARP jobs that should be created. Although the formula used in this calculation was stated in the text, it will be repeated here for convenience:

(1) If the number of unemployed persons is greater than it was three months earlier, then:

  (a) If the unemployment rate is less than 5.5%, expect next quarter's change in the number of unemployed persons to equal last quarter's change.

  (b) If the unemployment rate is greater than or equal to 5.5%, expect next quarter's change in the number of unemployed persons to equal one-half of last quarter's change.

(2) If the number of unemployed persons is less than it was three months earlier, then expect next quarter's change in the number of unemployed persons to equal last quarter's change.

The aim of this formula is to allow ARP to respond quickly during the beginning of the downswing, but to level off as soon as the downswing begins to level off. An unemployment rate of 5.5% is arbitrarily chosen to mark the beginning of the deceleration of the downswing. It is of course important for ARP to try to phase itself out as quickly as possible in the upswing.

A crucial simplification in this calculation is that the multiplier is 2.0 for the first quarter, and that it remains at 2.0 in successive quarters. In the text, this assumption was compared to the results obtained by Fromm and Taubman in their

simulations with the Brookings model. They found the one quarter multiplier for government employment to be 1.7, and then to oscillate between 1.9 and 2.1 during the next eight quarters (with one exceptional quarter, in which it was 1.7). Since in practice ARP should attempt to close the entire gap at the end of one quarter, according to the one quarter multiplier of 1.7, this calculation is correct in assuming that the entire gap is closed - the effect on unemployment calculated here should be accurate. This calculation, however, will understate the number of ARP jobs that need to be created to close the gap.

On the other hand, this calculation will overstate the number of ARP jobs that need to be created at the end of the downswing. At the end of the downswing, the ARP jobs created earlier, under the assumption of a 1.7 multiplier, now have a roughly 2.0 multiplier. Less ARP jobs will now have to be created, than would have been the case had earlier job creation been based on the assumption of a 2.0 multiplier. Thus, this calculation will show too few ARP jobs early in the downswing, too many later in the downswing, but the effect on unemployment should be shown fairly accurately.

During the upswing, this calculation will understate the speed with which ARP jobs could in practice be phased out. This follows directly from the distortion during the downswing, and the one year guarantee. Since this calculation understates the number of ARP jobs created early in the downswing, it will understate the number of ARP jobs that were created at least one year earlier, and can therefore be phased out. Thus, the calculation will tend to show unemployment to be lower during the latter part of the upswing than would in fact occur.

A feature of ARP that is of great importance for the calculation is that once an ARP job is created, it is guaranteed funding for a one year period. Thus, even if it is desired to reduce the stock of ARP jobs in order to sustain the trigger level during the upswing, this can only be done by eliminating ARP jobs when their one year is completed. If an ARP job is renewed, it is guaranteed for another year (it is really a new

job with a one year guarantee).

In the calculation, seasonally adjusted unemployment data are always used. The ARP trigger is 4.5%.

The steps in the calculation are presented in Tables A-1 and A-2. These will now be described. In April of 1970, data for March 1970 shows that the unemployment rate has risen to 4.4% as shown in column 3 of Table A-1. The number of unemployed has risen from 2.810 million (3.4%) in December 1969 to 3.637 million (4.4%) in March 1970, a rise of 827,000 (not shown in the Table.) According to the formula, it is expected that the number of unemployed will rise 827,000 between March 1970 and June 1970. Thus, the number of unemployed projected for June 1970 is 4.464 million (5.4%) as shown is column 5. Note that column 5 shows, next to March 1970, the prediction made in April 1970 about expected unemployment three months later in June 1970.

In order to decide the number of ARP jobs that should be created in April 1970, the forecast for June 1970 must be compared to the trigger level of unemployed. The trigger level is simply 4.5% of the expected civilian labor force. For simplicity in this calculation, it is assumed that the labor force in June will be the same as the labor force in March. (This is not too bad an assumption during recession, when the economy tends to discourage entry into the labor force.) In a downswing, the labor force tends to remain almost constant, the cyclical effect countering the secular growth. In practice, ARP should also forecast the expected labor force three months later. Column 1 shows 82.655 million in the labor force in March 1970. 4.5% of this is 3.719 million, shown in column 2. Since the trigger level of 3.719 million is less than the expected unemployed - 4.464 million - there is a gap of 745,000, as shown in column 6. Since a multiplier of 2.0 is assumed, ARP will try to close this gap by the end of the quarter by creating 373,000 in April 1970, as shown in column 1 of Table A-2. Note that 373,000 is on a horizontal line with March 1970, because it shows the number of ARP jobs that must be created in April 1970,

based on data of March 1970, in order to close the gap by June 1970. Column 4 shows that 373,000 ARP jobs are in fact created in April, and are guaranteed funding for one year.

Three months later, in July 1970, a new decision must be made. The easiest way to calculate how many ARP jobs should be created is to first calculate what unemployment would have been without ARP. If ARP had been in effect, then policy makers should add 745,000 to the number of unemployed in June to find the number that would have been unemployed without ARP. Since there actually was no ARP program, we can use the actual unemployment data from June 1970.

Between March and June, unemployment rose from 4.4% to only 4.8%, much less than anticipated by the formula, which projected 4.464 million, or 5.4%. Since the rise was 0.4%, the formula projects a rise over the next quarter of about 0.4%, to 5.2% in September. Thus, the number of ARP jobs needed to bridge the gap expected in September is less than the number created in April, when a 5.4% rate was anticipated for June.

Column 1 of A-2 shows that the desired stock of ARP jobs falls from 373,000 to 304,000. The desired change is -69,000, as shown in column 2. Here the one year guarantee becomes a constraint. None of the jobs created in April can be cut back in July, as shown in column 3. The best that can be done is to create no additional ARP jobs in July. Column 4 shows that, based on June data, no new ARP jobs are created in July 1970. Column 5 shows that the stock of ARP jobs in existence remains at 373,000, although the (-69) indicates that this total is 69,000 higher than is desired.

Data for September 1970 show that unemployment has increased by 0.6% to 5.4%. Thus, unemployment is expected to be about 6.0% in December, and the desired stock of ARP jobs rises to 643,000. This can be achieved by creating 270,000 new ARP jobs in October, as shown in column 4 of A-2. The 643 in column 5 matches the 643 in column 1, showing that, once again, the actual stock of ARP jobs for the quarter beginning October 1970 is at the desired level.

The next point of interest occurs in March 1971. Table A-1 shows that unemployment declines by 0.1% between December and March. The formula projects a similar decline between March and June. Table A-2 shows that, as a result, the desired stock of ARP jobs falls from 792,000 to 603,000, a decline of 189,000 as shown in column 2. Column 3 shows the number of ARP jobs up for renewal in April 1971, and therefore, the maximum cut in the stock of ARP jobs that can be achieved in April. This number in column 3 is obtained by looking at the number in column 4 one year earlier. Column 4 shows that 373,000 were created in April 1970; therefore, 373,000 is the maximum cut in April 1971, as shown in column 3. Since a large number of jobs can be cut, ARP can stay on target by renewing only 184,000, cutting the stock by the desired 189,000.

In June 1971, unemployment declines still further, to 5.8%, and a further cut is required in July to keep ARP on target for September. Column 3 of A-2, however, shows that in July no jobs can be cut, since none were created a year earlier in July 1970. Thus, actual ARP jobs, shown in column 5 to be 420,000, will exceed desired ARP jobs, shown in column 1 to be 420,000. In September 1971, Table A-1 shows that unemployment rises again to 6.0%, and the desired ARP stock rises to 769,000. 270,000 jobs are up for renewal; these are renewed, and others are created so that a total of 436,000 jobs, guaranteed for one year, are generated in October. Once again, actual ARP jobs match desired ARP jobs, at 769,000.

Beginning in March 1972, the unemployment rate that actually occurred reflects the impact of the Public Employment Program. Since ARP will replace PEP, ARP jobs should be based on what unemployment would have been had there been neither PEP nor ARP. Thus, column 4 in A-1 shows what unemployment would have been without either PEP or ARP. In March 1972, PEP is at half strength, and is assumed to reduce unemployment by 150,000. Thus, 5.222 million in column 4 exceeds 5.072 million in column 3 by 150,000. Beginning in June 1972, PEP is at full strength, and is assumed to reduce unemployment by 300,000. From this

Table A-1

UNEMPLOYMENT PROJECTIONS UNDER THE ARP FORECASTING RULE

(Seasonally Adjusted Data)

(In Thousands)

	1	2	3	4	5	6
	Actual Civilian Labor Force	Projected Target # Unemployed 3 months later (4.5%)	Actual # Unemployed with PEP, without ARP	# Unemployed without PEP, without ARP	# Unemployed as projected by formula 3 months later without PEP or ARP	Gap 3 months later
Dec. 1969	81,589	3,672	2,810 (3.4%)			
Mar. 1970	82,655	3,719	3,637 (4.4%)		4,464	745
June 1970	82,388	3,707	3,976 (4.8%)		4,315	608
Sep. 1970	82,945	3,733	4,497 (5.4%)		5,018	1,285
Dec. 1970	83,485	3,757	5,058 (6.1%)		5,340	1,583
Mar. 1971	83,455	3,755	5,009 (6.0%)		4,960	1,205
June 1971	83,401	3,753	4,801 (5.8%)		4,593	840
Sep. 1971	84,491	3,722	5,040 (6.0%)		5,160	1,438
Dec. 1971	85,225	3,835	5,127 (6.0%)		5,171	1,342
Mar. 1972	86,313	3,884	5,072 (5.9%)	5,222 (6.1%)	5,270	1,386
June 1972	86,395	3,888	4,728 (5.5%)	5,028 (5.8%)	4,834	946
Sep. 1972	87,049	3,917	4,827 (5.5%)	5,127 (5.9%)	5,177	1,260
Dec. 1972	87,267	3,927	4,487 (5.1%)	4,787 (5.4%)	4,447	520
Mar. 1973	88,268	3,972	4,379 (5.0%)	4,679 (5.3%)	4,571	599

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(Hypothetical)

	1	2	3	4	5	6
	Actual Civilian Labor Force	Projected Target # Unemployed 3 months later (4.5%)	Actual # Unemployed with PEP, without ARP	# Unemployed without PEP without ARP	# Unemployed as projected by formula 3 months later without PEP or ARP	Gap 3 months later
Dec. 1972	87,799	3,951	4,390 (5.0%)	4,690 (5.3%)	4,253	302
Mar. 1973	88,549	3,985	4,162 (4.7%)	4,462 (5.0%)	4,234	249
June 1973	89,299	4,018	3,985 (4.5%)	4,285 (4.8%)	4,108	90
Sep. 1973	90,049	4,052	3,782 (4.2%)	4,082 (4.5%)	3,879	-173
Dec. 1973	90,799	4,086	3,572 (4.0%)	3,872 (4.3%)	3,662	-424

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Table A-2

THE NUMBER OF ARP JOBS CREATED EACH QUARTER

	(In Thousands)				
	1	2	3	4	5
	Target # total ARP jobs, 3 months later	Change in ARP job total to meet target 3 months later	Maximum cut in total ARP jobs	# of new ARP 1 year jobs	Actual # total ARP jobs for next 3 months
Dec. 1969					
Mar. 1970	373	+373	0	373	373
June 1970	304	- 69	0	0(- 69)	373(- 69)
Sep. 1970	643	+270	0	270	643
Dec. 1970	792	+149	0	149	792
Mar. 1971	603	-189	373	184	603
June 1971	420	-183	0	0(-183)	603(-183)
Sep. 1971	769	+166	270	436	769
Dec. 1971	671	- 98	149	51	671
Mar. 1972	693	+ 22	184	206	693
June 1972	473	-220	0	0(-220)	693(-220)
Sep. 1972	630	- 63	436	373	630
Dec. 1972	260	-370	51	0(-319)	579(-319)
Mar. 1973	300	-279	206	0(- 73)	373(- 73)
June 1973	218	-155	0	0(-155)	373(-155)
Sep. 1973	286	- 87	373	286	286
	(Hypothetical)				
Dec. 1972	151	-479	51	0(-428)	579(-428)
Mar. 1973	125	-454	206	0(-248)	373(-248)
June 1973	45	-328	0	0(-328)	373(-328)
Sep. 1973	0	-373	373	0	0
Dec. 1973	0	0	0	0	0

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Table A-3

THE IMPACT OF ARP ON UNEMPLOYMENT

	(In Thousands)			
	1	2	3	4
	Unemployment without PEP or ARP	Stock of ARP jobs	Jobs due to ARP	Unemployment with ARP (4.5% trigger)
Dec. 1969	2,810 (3.4%)	0	0	2,810 (3.4%)
Mar. 1970	3,637 (4.4%)	0	0	3,637 (4.4%)
June 1970	3,976 (4.8%)	373	746	3,230 (3.9%)
Sep. 1970	4,497 (5.4%)	373	746	3,751 (4.5%)
Dec. 1970	5,058 (6.1%)	643	1286	3,772 (4.5%)
Mar. 1971	5,009 (6.0%)	792	1584	3,425 (4.1%)
June 1971	4,801 (5.8%)	603	1206	3,595 (4.3%)
Sep. 1971	5,040 (6.0%)	603	1206	3,834 (4.5%)
Dec. 1971	5,127 (6.0%)	769	1538	3,589 (4.2%)
Mar. 1972	5,222 (6.1%)	671	1342	3,880 (4.5%)
June 1972	5,028 (5.8%)	693	1386	3,642 (4.2%)
Sep. 1972	5,127 (5.9%)	693	1386	3,741 (4.3%)
Dec. 1972	4,787 (5.4%)	630	1260	3,527 (4.0%)
Mar. 1973	4,679 (5.3%)	579	1158	3,521 (4.0%)
June 1973	4,558 (5.1%)	373	746	3,812 (4.3%)
Sep. 1973	4,576 (5.1%)	373	746	3,830 (4.3%)
		(Hypothetical)		
Dec. 1972	4,690 (5.3%)	630	1260	3,430 (3.9%)
Mar. 1973	4,462 (5.0%)	579	1158	3,304 (3.7%)
June 1973	4,285 (4.8%)	373	746	3,539 (4.0%)
Sep. 1973	4,082 (4.5%)	373	746	3,336 (3.7%)
Dec. 1973	3,872 (4.3%)	0	0	3,872 (4.3%)

point on, column 4 is 300,000 larger than column 3.

The process continues until the upswing begins. During most of the upswing, the stock of ARP jobs is larger than the desired level because of the constraint of the one year guarantee. When this occurs, the same procedure that was described above for July 1970 is followed. The Tables show during the actual upswing, and during a hypothetical upswing which is more rapid.

Table A-3 shows the final step of the calculation, and presents the comparison of unemployment rates without ARP or PEP, to the rates with ARP. Column 1 of A-3 simply repeats column 4 of A-1 for convenience. Column 2 of A-3 is identical to column 5 of A-2, except that each number in column 2 of A-3 is set three months later than that same number in column 5 in A-2. The reason is straightforward. Column 5 in A-2 shows that based on March 1970 data, in April 1970 the stock of ARP jobs was set at 373,000, for the next three months. The impact of this stock of ARP jobs, and its multiplier, shows up in the data for June 1970, three months later. Thus, the 373 in column 2 of A-3 is set next to June 1970, not March 1970.

Column 3 of A-3 is simply twice column 2, under the assumption of a multiplier of 2.0. Column 4 is obtained by subtracting column 3 from column 1; unemployment with ARP equals unemployment without any program minus the stock of jobs due to ARP.

The above calculation was based on an ARP trigger of 4.5%. The same calculation was made for an ARP trigger of 5.0%. While this calculation is not presented in this Appendix, the results are shown in Table 8 of the text. The steps of the calculation are of course identical to the steps shown here.

PART II

THE DESIGN OF A FEDERAL EMPLOYMENT PROGRAM IN A STRATEGY TO RAISE LOW EARNINGS

Chapter 1

A STRATEGY TO RAISE LOW EARNINGS

In 1971, 5.3 million families had income below the official poverty or low-income level.[1] In about half of these families, the head did not work at all in 1971.[2] Most, though not all, of these family heads were elderly, ill or disabled, or responsible for young children.[3] The low income of these families must be treated by a transfer program unrelated to work, and perhaps child care if this is deemed desirable. Here, we will focus exclusively on how to assist the more than half of all poor families in which the head is capable of work.

A fact of great significance for policy is that of these 2.8 million family heads who worked at all in 1971, 1.1 million or roughly 40% worked year-round, 50-52 weeks, at a full-time job.[4] For these persons, only a higher wage could have raised their annual earnings. An addition 0.2 million worked 40-49 weeks at a full-time job. While the elimination of unemployment could have helped this group, a higher wage would have been equally important. For the remaining half of these 2.8 million, increased full-time employment is the most urgent need, but even these persons would benefit from a higher wage.

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1. U.S. Bureau of the Census [40], Dec. 1972, Table 26, p. 97.
2. U.S. Bureau of the Census [40], Dec. 1972, Table 26, p. 97.
3. U.S. Bureau of the Census [40], Dec. 1972, Table 26, p. 97.
4. U.S. Bureau of the Census [40], Dec. 1972, Table 26, p. 97.

Thus, the following central fact emerges: Over one-fifth of all poor families (1.1 million) were headed by someone who worked full-time, 50-52 weeks, and about one-fourth (1.3 million) were headed by someone who worked full-time, at least 40 weeks.

If these 1.1 million families were large, then they would be classified as poor, even though the wage earned was fairly high. This is not the case, however. The mean size of a poor family was only 3.85 persons in 1971, only a bit larger than the 3.50 mean for non-poverty families.[5] On the average, the poverty threshold for these families was roughly $4,000 in 1971, implying a maximum hourly wage of $2.00 for 50 weeks of full-time work.[6] The average hourly wage of the family head would be less if the family received income other than from the head's earnings. In about 40% of the 1.1 million families, there were two or more earners.[7] Thus, it is likely that most of these family heads earned an average wage of less than $2.00 in 1971.

The following conclusion can be drawn: Over one-fifth of all poverty is caused, not by non-employment or part-time employment, but by a low wage in spite of full-time, year-round work. Furthermore, a low wage is a major cause of over a fourth of poverty.

A. THE HIGH MINIMUM WAGE STRATEGY (HMW)

In 1973, at any point in time roughly 15 million persons

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5. U.S. Bureau of the Census [40], Dec. 1972, Table H, p. 8.

6. According to U.S. Bureau of the Census [40], Dec. 1972, p. 18, the poverty threshold for a family of three was $3,229, and of four, was $4,137 in 1971. Interpolating for 3.85, the mean size of a poor family, gives roughly $4,000.

7. U.S. Bureau of the Census [40], Dec. 1972, Table 24, p. 93.

held jobs that paid less than $2.40 an hour.[8] Of the 15 million, roughly 2.2 million were poor family heads.[9] Unfortunately, the composition of the rest of the 15 million must be estimated indirectly, since the 15 million figure is derived from an establishment survey in which employee characteristics were not ob-

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8. In April 1970, the Bureau of Labor Statistics conducted a survey of establishments for the Employment Standards Administration (which is responsible for administering the Fair Labor Standards Act). The results were published in Wages and Hours of Work of Nonsupervisory Employees in all Nonfarm Industries by Coverage Status under the Fair Labor Standards Act, ESA, 1972. The survey included all industries except farming, domestic, and government. It showed that in the survey week, 11.2 million jobs in these sectors paid $2.00 or less. $2.00 in 1970 corresponds to roughly $2.40 in 1973, since average hourly earnings in the retail sector, which constituted one-third of the 11.2 million jobs, rose about $.40 between 1969 and 1972, according to the Economic Report of the President, 1973, Table C-30.

   Estimates of farmworkers, domestic workers, and public employees must be added. There were 1.2 million farmworkers at all wage levels, according to the ESA report, Minimum Wage and Maximum Hours, 1971, in 1970. The Background Material on the Fair Labor Standards Act Amendments of 1972, July 1972, prepared for the Subcommittee on Labor of the Committee on Labor and Public Welfare of the U.S. Senate shows that a large percentage of all farmworkers would be under $2.00 in 1970. A rough estimate would be 0.9 million. According to the same ESA 1971 report, there were 8 million nonsupervisory public sector jobs at all wage levels. A rough estimate is that 1 million would be under $2.00 (the same fraction as in manufacturing). Finally, the same report shows 1.8 million private household workers, 87% of whom were less than $2.00. (1.5 million).

   This gives a total of 14.6 million as a rough estimate of all below $2.00 jobs in 1970. Between 1969 and 1972, total employment in the economy increased about 5%, according to the Manpower Report of the President, 1973, Table A-1. Thus, 15 million is a rough estimate of the number of jobs in the economy at a point in time in 1973 that pay less than $2.40 per hour.

9. U.S. Bureau of the Census [40], June 1973, Table 4. No. 88 was published June 1973, based on data from the survey week, March 1973.

tained. A fraction of these were heads of families with income just sufficient to lift them above the official poverty level. As noted above, on the average, any year-round full-time worker who earned more than about $2.13 (adjusting the $2.00 wage in 1971 for the advance in the Consumer Price Index) in 1973 would lift his family out of official poverty.[10] Even if all employed teenagers work for less than $2.40, this would not exceed 6 million, the number of employed teenagers at any point in time.[11] An important fraction of teenagers and second earners are members of poor or near poor households.

If the Federal minimum wage had been set at $2.40 in 1973 and extended to cover nearly all workers, then the great majority of the 15 million would have remained employed and improved their earnings. (The Federal minimum wage in 1973 was $1.60. In spring, 1974, the minimum wage was raised, and is scheduled to attain $2.30 by 1976. This will have approximately the same effect on the low wage sector in 1976 as a $1.90 minimum wage would have had in 1973, since the average wage will advance about $.40 between 1973 and 1976.) Since the average wage of the 15 million was about $2.10, annual earnings would have increased about $600, or 15%.[12] Some fraction of the 15 million, however, would have become unemployed because of the higher minimum wage. While reliable estimates are not available, it is probably pessimistic to assume that employment would have been reduced as much as 2 million. This would imply that a one-

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10. Between 1971 and 1972, and poverty threshold for a non-farm family of four was raised from $4,137 to $4,275, a 3.3% increase in response to the increase in the CPI. The 1973 poverty wage would therefore be about 6.6% higher than the 1971 wage of $2.00, and thus, $2.13.

11. U.S. Manpower Administration [49], 1973, Table A-5.

12. The April 1970 report cited in Footnote 8, this chapter.

seventh increase in the wage, from $2.10 to $2.40, would reduce employment by roughly one-seventh (2 out of 15 million), or an elasticity of demand for labor in the below-$2.40 sector of unity.[13]

This potential unemployment effect usually limits the raising and extending of the minimum wage. If the unemployment effect is not offset, then a relatively high and extensive minimum wage may well do more harm than good. Suppose, however, that a Federal employment program could be designed that would induce an increase in employment in the above-$2.40 sector of approximately 2 million. The aim would be to induce an increase in the level of above-$2.40 nonsupervisory employment from its current 45 million, to about 47 million.[14] The most attractive 2 million of the 15 million would move into these jobs, and 13 million would remain in their current jobs at the new minimum wage of $2.40. The 2 million new jobs must be nonsupervisory (a convenient classification) if they are to match the skills of the 2 million likely to shift.

The two-part strategy of the high (and extensive) minimum wage and the Federal employment program, which will be referred to as the HMW strategy, would seek to shift the size of the two sectors from 15-45 to 13-47, for a given level of aggregate demand, and therefore, inflationary pressure. The Federal program

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13. In an econometric study of the demand for low wage labor, Albert Zucker concludes, ". . . the true elasticities would not appear to be substantially different from unity," in the long run. I am unable to comment on his techniques, or whether his result is representative. (Zucker, Minimum Wages and the Long-run Elasticity of Demand for Low-Wage Labor). Zucker refers to Reynolds and Gregory's study which found similar results for Puerto Rico (1965). All such estimates must be regarded as fairly uncertain, however.

14. Using data from the ESA's Minimum Wage and Maximum Hours report of 1972, there would be roughly 60 million nonsupervisory employees in all sectors of the economy in 1973.

would attempt to induce employers to use more above-$2.40 non-supervisory labor relative to other inputs, for a given product demand. It must be emphasized that the desirability of the HMW strategy depends crucially on the ability to offset the unemployment effect of the minimum wage through a Federal employment program. Whether this can in practice be accomplished is the subject of the analysis that follows. Here, the consequences of finding a way to do this will be set out.

An expansion from 45 to 47 million is roughly a 4% increase. If the elasticity of demand for labor in the above-$2.40 sector were unity, this expansion could be induced by subsidizing additional high wage jobs by only 4% of the wage. Since reliable estimates of employer response to wage cuts via a subsidy program are unavailable, let us assume, fairly cautiously, that to induce an increase of 4% requires a wage cut of, say, 33%. This means that the elasticity of demand for labor in the over-$2.40 sector is less than 0.2.[15] It should be recognized that since the Federal employment program should be permanent, it is the long-run response, allowing sufficient time for adjusting capital, that is relevant, and is assumed to be at least 0.2. Since the average wage in the over-$2.40 sector is about $3.00, the average subsidy required is $1.00, or annually. $2,000 per employee, though the subsidy must be set higher in regions where the unemployment effect of the minimum wage will be relatively

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15. In an econometric study, Waud finds that a 1% decrease in the wage of a production worker hour in non-durable manufacturing will on the average increase man-hours worked by 0.4% (elasticity of 0.4%). In durable manufacturing, the average elasticity was 1.5. The elasticity of employment should be less than the elasticity of man-hours, since man-hours can increase by adding hours per employee. (Journal of Political Economy, May/June 1968). No attempt is made here to evaluate his technique, or to claim his result is representative. It is likely that the assumption of 0.2 is conservative, however.

large (i.e. the South), and lower, where the effect will be relatively small.[16]

If the subsidy can be confined to truly additional employees, the cost of the program would be $4 billion (2 million employees at $2,000 per employee). As will be discussed later, no program will be able to prevent paying for a significant number of persons who would have been employed anyway. Later it will be shown that it may be possible to keep this leakage from more than doubling the cost of the program. If the absorption of the 2 million can be achieved for roughly $8 billion, then the HMW strategy will have an anti-poverty efficiency comparable to that of the three prominent alternatives: the wage or earnings supplement; the negative income tax or demogrant; and the raising of the wage of heads of households by guaranteeing them a job at an above poverty wage, thus forcing employers to match that wage in order to retain them.

The HMW strategy will be compared to each of the three alternatives shortly. Here, some arithmetic will illustrate why anti-poverty efficiency is likely to be comparable. Under the HMW strategy, an expenditure of roughly $8 billion, using probably pessimistic assumptions, will raise the earnings of the 15 million by roughly $11.4 billion. The 13 million who remain in the same job increase their earnings an average of $.30 an hour or $600 a year, for a total increase of $7.8 billion. The 2 million who move into better jobs in the above-$2.40 sector increase their earnings an average of $.90 an hour, or $1,800 a year, for a total increase of $3.6 billion. Thus, for each $1 of Federal expenditure, the earnings of low-wage persons increases by more than $1. This contrasts with the negative income tax or demogrant (hereafter referred to as NIT) in which $1 of Federal

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16. April 1970 study, cited in Footnote 8, this chapter.

expenditure leads to $1 increase in income (assuming there is no reduction in work effort). It contrasts with a wage or earnings supplement (hereafter referred to as ES) in which $1 of Federal spending can at best raise income $1, and will probably raise it less than $1, since as a result of the supplement, the pre-supplement wage may fall.[17]

While HMW is likely to be more efficient in raising the earnings of all 15 million, it must be remembered that NIT and ES are able to target Federal expenditure on poor, or near poor, heads of households among the 15 million. There are a little over 2 million officially poor family heads, and perhaps 3 million near-poor heads. A significant fraction of the non-heads, however, are members of poor or near-poor families. Thus, while NIT and ES may have the edge on strictly anti-poverty efficiency, HMW should do as well in assisting all relatively low-income families. It should also be recognized that most of the 2 million raised to an average of $3.00 an hour, instead of $2.40, will be heads of households, since they are likely to be most attractive to high wage employers.

The wage of household heads can be raised by guaranteeing them the option of working at an above poverty wage. Under this strategy (hereafter referred to as GJO), suppose all heads have the option to work at $2.40. Employers will have to raise their wage, in general, to at least $2.40 to retain them. Some employers will find it worthwhile to do so, even if they must raise the wage of non-heads doing the same work as a result. Others will find it worthwhile, only if they can manage to pay heads more than non-heads who do the same work. Finally, others will prefer to substitute non-heads, rather than raise the wage to $2.40. No reliable estimate of their response is available. If the employers choose to retain less than 3 million of the

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17. Barth [1].

roughly 5 million heads out of the 15 million, then more than 2 million jobs will have to be created to implement the guarantee. This will make GJO less efficient than HMW, where 2 million jobs must be created in order to raise all 5 million heads to at least $2.40.

The essence of the HMW strategy is that the bulk of the work is done by the Fair Labor Standards Act, at virtually no cost to the Federal treasury. The minimum wage raises the earnings of 13 of the 15 million. Federal funds are concentrated on creating employment for 2 million. This is similar to GJO in that Federal funds are not spent on each person aided, but only on the fraction of beneficiaries who need new jobs. In contrast, NIT and ES both require Federal expenditure for every person aided. HMW funds a relatively small number of jobs, at a relatively high cost per job; NIT and ES fund a relatively large number of persons, but at a smaller cost per person. The arithmetic suggests that Treasury efficiency should be comparable.

The HMW strategy involves two essential components. If the minimum wage alone were raised, then significant unemployment would eventually occur. On the other hand, without the minimum wage, spending $8 billion to help only 2 million might be less desirable than doing something for all 15 million, and in particular, all 5 million heads of households.

It is important to review the elements that will determine the cost of HMW. First, in response to the subsidy, employers may bid up the wage as they compete for new employees. If the subsidy of $1 causes the wage to rise $.25, the wage to employers has only been reduced $.75. The wage will only rise if the supply of labor to high wage employers is not very elastic. As will be shown shortly, there is strong evidence to support the view that the supply of labor to the high wage sector is often artificially restricted. If this is so, then the supply of labor is effectively elastic at the going wage. Furthermore, the existence of unemployment tends to make the supply of labor elastic. Since wages in the high wage sector should therefore

not have to be raised to call forth additional employees, it is not likely that the wage will be bid up as a result of the Federal employment program. Any rise in the wage would partially offset the subsidy, and raise the cost of creating a given number of jobs.

Second, employers respond to the net, rather than the gross, subsidy per job. It must be recognized that the gross subsidy will exceed the net if the employer incurs a cost just to participate in the program. This participation cost will be determined by the method of administration and degree of supervision. The greater the participation cost, the greater the cost of inducing a given number of jobs.

Third, the long-run elasticities of demand for labor in the above-minimum wage and below-minimum wage sectors are of course of central importance. The lower the elasticity of demand in the low wage sector, the less will be the unemployment effect of raising the minimum wage, and the less the number of jobs that will have to be created. The higher the elasticity of demand in the high wage sector, the smaller the subsidy required to induce the creation of a given number of additional jobs. Because the Federal employment program should be permanent, what counts is the response when adequate time is allowed for the adjustment of physical capital, technology, and production processes. Thus, the long-run elasticity is the relevant one.

Fourth, leakage can raise the cost of the program. It will be shown that for each genuinely additional job funded, it is inevitable that jobs that would have existed anyway will also be funded. The size of the leakage depends on the effectiveness of maintenace of effort standards. This fundamental problem will be analyzed later.

Finally, the size of the base that must absorb the additional employees will affect cost. If all producers in the economy are eligible for subsidy, then 2 million will be added to the 45 million nonsupervisory employees in all sectors - only a 4% increase. If the Federal employment program is restricted to the public sector, however, then the 2 million will

be added to a base of only about 8 or 9 million - a more than 20% increase. A much larger subsidy per job will be needed to induce a 20% increase than a 4% increase. Thus, the greater the nonsupervisory employment of all producers included in the program, the lower will be the cost of the program.

B. ECONOMIC EFFICIENCY AND IMPACT OF HMW

While this strategy may be efficient for the Federal treasury, its efficiency for the economy is a separate issue. The shift of workers from low wage to high wage jobs will increase national output, and therefore be economically efficient, if the cost of upgrading is less than the increase in productivity. This will be the case if the size of the high wage sector results, not from the free market, but from restrictions such as union bargaining. On the other hand, if the wage differential reflects a free market equilibrium, this implies that the cost of upgrading outweighs the increase in productivity, and the shift will reduce the value of national output.

Under a free labor market, a wage differential cannot be sustained as long as high wage employers find it profitable to hire low-wage workers at an intermediate wage. This will be the case as long as the net productivity (gross productivity minus the cost of upgrading) of the low-wage worker will increase if he shifts to the high wage job. If so, the employer will offer an intermediate wage, and the worker will be glad to shift, thereby narrowing the wage differential. The differential can be sustained, however, if for all low-wage (or unemployed) workers, net productivity would decrease. If the cost of training the person exceeded the differential, net productivity would decrease if he shifted. The high wage employer could not offer him a wage above his current level, and the differential would be stable, without restriction.

Even if a shift would increase net productivity, a wage differential can be sustained by restricting wage competition in the high wage sector. If individual workers cannot be hired

at an intermediate wage, despite the profitability of doing so, then the differential will remain. Union bargaining is, of course, the primary method of limiting wage competition. Union bargaining results in a smaller high wage sector, and a larger low wage sector, than would occur under a free labor market and an efficient allocation of labor.

While both explanations of the wage differential have merit, it seems certain that restrictions and union bargaining are quite important. Within the same occupation, requiring roughly the same skill and education, there is substantial variation in earnings, even within the same labor market area. Under a free labor market, we would expect persons in the same occupation, having similar skill and education, to have similar earnings. If certain employers paid some members of the occupation a higher wage, other members would offer to work for less. Since their skills are the same, these employers would find it profitable to hire them at an intermediate wage, and the wage would be competed down until it was roughly equalized for all members of the occupation with similar skills. Yet, the actual size of differentials within the same occupation seems too large to support the free market explanation.

Consider the table presented on the following page showing data from a BLS report. Some of the spread in earnings is accounted for by regional differences, or even differences among labor market areas within a single region. Nevertheless, data on regional differences provided by the same report shows this cannot account for much of the variation in earnings. For example, even the earnings of the median union member in the South, the poorest region ($7,942 for all male union operatives) exceeds the earnings of the median non-union operatives in the most affluent region, the North Central ($7,380).

While the source of wage differentials is obviously complex, this brief analysis suggests that it is just as likely that the minimum wage-Federal employment program strategy will increase economic efficiency as that it will decrease it. The strategy may improve efficiency by undoing the effects of the

Table 9

EARNINGS OF NEGRO MALES BY OCCUPATION AND UNION MEMBERSHIP
U.S. 1970

Negro Males (year-round, full-time workers)	Median Income	Under $3,000	$3,000 $4,999	$5,000 $6,999	$7,000 $9,999	Over $10,000
Operatives (46%) Union	$7,512	1.5%	17.1%	24.1%	42.9%	14.4%
(54%) Non-union	$5,493	6.3%	35.5%	33.2%	20.6%	4.5%
Non-farm Laborers (36%) Union	$7,192	1.4%	18.3%	27.6%	42.4%	10.3%
(64%) Non-union	$4,690	16.5%	39.5%	27.4%	11.5%	5.2%

Source: Bureau of Labor Statistics, Selected Earnings and Demographic Characteristics of Union Members, 1970, 1971.

restrictions, and more closely approximating the allocation between the wage sectors that would have occurred under the free market. It achieves this by subsidizing the wage in the high wage sector, so that these employers face the lower wage cost that would have emerged under wage competition. The subsidy undoes the misallocation of labor among sectors without undermining the higher wage that results from the union restrictions.

The effect of this strategy on prices is also important. Output of industries with a relatively high concentration of low wage jobs will decrease, and prices, increase; conversely, output of industries with a relatively high concentration of high wage jobs will increase, and prices will eventually be less than they would have been. With aggregate demand constant, the average price level should remain the same, unless the introduction of the strategy sets off a round of administered, cost-push inflation. In the current inflationary climate, this will probably occur, to some extent. While prices in the low wage industries are sure to go up, it is less certain that prices in the high wage sector will be altered.

There will also be some tendency for the high wage workers to try to retain the differential, in response to the increase in the minimum wage. It is sometimes assumed that they will automatically be able to do so. In firms where both low and high wage workers are employed, there may well be pressure to restore some of the differential, at least for the lowest paid of the above-minimum wage workers. There are a significant number of high wage firms, however, where few or no workers will be affected by the minimum wage increase. The assertion that employees in these firms will succeed in restoring most or all of the differential rests on the belief that prior to the increase in the minimum wage, worker demand for an increase was less, and employer resistance greater.

There is no reason to expect employer resistance to decline, since an increase after the minimum wage increase will have the same effect on profits (unless low wage competition is important in the industry, and the higher minimum wage has offered protec-

tion). If high wage workers now become willing to strike for a higher wage, while previously they were unwilling to do so, this would alter the balance. It is not clear, a priori, that this will occur. These points are not intended to deny that there will be a tendency to partially restore the differential; but only to show that such a process is not automatic, and will encounter resistance. Past increases in the minimum wage have successfully narrowed the differential in the short-run. While the differential is usually restored over several years, this can be explained by rising productivity, (i.e. the minimum wage falling behind again) rather than a reaction to the higher minimum wage. The issue must be decided on the basis of careful empirical study.

Even if there is a short-run inflationary effect, the strategy aims at a once-and-for-all shift in the size of the two sectors. Thereafter, the economy will grow in these proportions with no further price effects. Public policy must weigh the costs of additional inflation in the short-run against a permanent shift in the distribution of income in favor of the working poor. One of the major costs of inflation is that it redistributes income, often inequitably. If it is considered desirable to increase the income of the working poor, the short-run inflationary effect that accompanies such a shift may be considered worth incurring.

C. THE PROBLEM OF TEENAGE UNEMPLOYMENT

The above strategy, involving the raising and extending of the minimum wage, comes at a time when a subminimum wage for teenagers is being seriously considered, and when teenage unemployment is given as a reason to slow the advance of the minimum wage. An increase and extension of the minimum wage, without supplementary policy, will undoubtedly increase teenage employment.

A trade-off must be squarely faced. There is a direct conflict between the goal of reducing poverty, and the goal of re-

ducing teenage unemployment. A subminimum wage for teenagers will reduce the wages, or employment, of low-skilled adult workers - the very persons most likely to head poor families. Although I have seen quite a few studies of the effect of the minimum wage on teenage unemployment, I have not seen any estimate of the effect of the sub-minimum wage on low-skilled, adult unemployment. Yet it seems likely that the effect would be serious. Few employers would try to replace highly skilled adults with teenagers, regardless of the wage advantage. On the other hand, most poor family heads hold jobs requiring little training or experience. It is precisely these jobs for which employers should often find substitution profitable. A policy that might seriously harm poor heads of households is not likely to be the best of the available alternatives.

The effect of a low minimum, or subminimum wage on teenagers is mixed. While about 1 million teenagers were unemployed at a point in time in 1972, about 6 million were employed.[18] While a subminimum wage will help the 1 million, it will hurt the 6 million, many of whom are paid close to the legal minimum. While redistributions from the 6 million to the 1 million might be supported, the loss must be recognized as well as the gain.

Consider a choice between four policies. Under the first, the minimum wage is set at $2.40 for all adults, but a subminimum wage of $2.00 is set for teenagers. Under the second, the minimum wage is set for everyone at $2.00, without any complementary anti-poverty program. Under the third, the minimum wage is set for everyone at $2.00, and either NIT, ES, or GJO is used to raise incomes. Under the fourth, the minimum wage is set at $2.40 for everyone, and employment is maintained by the Federal employment program, and a special Federal job program for teenagers.

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18. U.S. Manpower Administration [49], 1973, Table A-5.

The first approach involves the risk of significant substitution of teenagers for low-skilled adults, among whom are most poor family heads. The inequity of such substitution is likely to outweigh any gains achieved. The second approach eliminates the incentive for substitution. The lower minimum wage, however, means that the earnings of 13 million persons will be about $5 billion less than it would be at a $2.40 minimum wage (under the recent $1.60 minimum, the average wage of the 13 million was $2.10; under a $2.00 minimum, the average would be about $2.20; this is $.20 an hour less than under the $2.40 minimum). The annual earnings of the over 1 million poor family heads who work year-round, full-time will average $400, or 10% less. Under the third approach, the lower minimum wage would be offset by either NIT, ES, or GJO. Each will be compared to HMW shortly.

Under HMW, incomes would be higher for the 13 million due to the $2.40 minimum wage, and employment would be maintained by the Federal employment program, and a special Federal job program for teenagers. Earlier it was estimated that offsetting the reduction in employment from the shift from $1.60 to $2.40 should not cost more than $8 billion. Offsetting a shift from $2.00 to $2.40 should not cost more than $5 or $6 billion. While the burden for maintaining employment could be placed solely on the regular Federal employment program, special concern for teenagers might justify supplementing that program with a special teenage job program. This would insure that teenagers were as well off under this approach as under competing alternatives.

Suppose a $2.40 minimum cuts employment 1.2 million compared to a $2.00 minimum (earlier it was assumed that the reduction was 2 million compared to a $1.60 minimum wage). While the regular Federal employment program can attempt to create 1.2 million additional jobs, there may be concern that teenagers will get too small a share without special earmarking of funds. If so, the Federal employment program could create, say 1.0 million jobs, and an improved Neighborhood Youth Corps (or a better alternative) could create 200,000 jobs earmarked for teenagers. In

either case, the cost would be about $5 or $6 billion.

If it is desired to reduce the level of teenage unemployment, or unemployment in general, the Federal employment program can be increased so that it more than offsets the effect of the higher minimum wage, and achieves a net reduction in unemployment. Which strategy is chosen - HMW, NIT, ES, or GJO - depends on other aspects of each strategy besides Treasury efficiency. It is essential, therefore, to compare the most important aspects of each of these with HMW.

D. COMPARISON WITH A WAGE OR EARNINGS SUPPLEMENT PLAN (ES)

As an alternative to the Family Assistance Plan, the Senate Finance Committee offered a proposal that included a wage supplement for family heads who earn less than the minimum wage, and an earnings bonus for families whose annual earnings are less than some break-even level.[19] Robert Haveman has proposed an earnings subsidy that modifies the Committee's plan.[20] Detailed analysis cannot be pursued here, and only the most important aspects will be highlighted.

Under the HMW strategy, the minimum wage raises the earnings of the vast majority of low wage workers, with virtually no cost to the Federal treasury; Federal funds are spent to create employment to offset any reduction in jobs induced by the high and extensive minimum wage. Under the supplement plan, the minimum wage is set lower, so there is no reduction in jobs; Federal funds are spent to raise the earnings of low wage persons. Supplement is concentrated on family heads, or families, increasing the anti-poverty effectiveness of the Fed-

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19. U.S. Senate, Committee on Finance [53].

20. Haveman [17].

eral expenditure. The number of jobs that are needed to offset the high minimum wage will be less than the number of family heads aided by the supplement plan. On the other hand, each job will require a greater expense (especially when leakage is considered) than each family head aided. As a result, it is difficult to know which strategy will have a greater anti-low-income efficiency, but the supplement plan is likely to have the edge.

Under the HMW strategy, assume that the 15 million below $2.40 can be raised to at least that level - 13 million to $2.40 and 2 million to $3.00 - for an expenditure of $8 billion, assuming leakage doubles the cost of the program. Of the 15 million, somewhat more than 2 million are officially poor family heads, and perhaps 3 million others are heads of low income families. Assume 2 of the 5 million are raised to $3.00, since family heads are most likely to get these jobs. Then 3 million have their annual earnings raised $600 per head, and 2 million, $1,800 per head, since their average wage is $2.10. Under the supplement plan, assume the pre-supplement wage falls to $2.00 as a result of the supplement (the pre-supplement wage will fall as long as there is some elasticity to the supply of labor). Then to raise 3 million to $2.40 will cost $2.4 billion, and 2 million to $3.00 will cost $4.0 billion, or $6.4 billion, which compares favorably with $8 billion for the HMW strategy. It should be stressed that the assumptions that must be made to cost out each strategy leave significant uncertainty in the result. The most that can be said is that the treasury efficiencies may be comparable, and more precise estimation is required to know which is likely to do better.

While the cost comparison is uncertain, other differences are more definite. Perhaps the most important is this: under the HMW strategy, low wage competition is significantly reduced; under the supplement plan, low wage competition is increased. In his exposition, Haveman devotes a section to the effect of a supplement plan on the national wage structure. He writes:

> In this context, it seems unlikely that the demand for higher skill workers and the prevailing wage paid them would be greatly undermined by the wage-subsidy provision of the program. This erosion can occur only if employers can easily substitute low for high skill workers in response to a change in relative prices. Such substitution is difficult given the influence of labor organizations and the industrial coverage of the minimum wage.[21]

Haveman focuses his analysis on the possibilities for substitution within a single firm between high and low skilled labor, and correctly concludes that this should be limited. He does not address, however, the effect on competition between low wage and high wage firms in the same industry, and specifically on the workers in the high wage firms. It is union workers in relatively high wage textile plants who vigorously support the raising of the minimum wage, in order to reduce competition from low wage, non-union textile plants. In contrast, the supplement plan will reduce the wage cost to low wage employers. High wage employers will have to lower prices and wages, or reduce their sales and thus employment. The reality of this cometition is testified to by the strong support for the raising and extending of the minimum wage by relatively high wage unions in industries with low wage non-union competition. Whether one feels such competition is good or bad, the opposite effects of the two strategies should be clearly recognized.

A second difference is the attitude of recipients and the public towards the minimum wage and supplements. The minimum wage is usually regarded as a protection against exploitation for workers with low skill lacking union protection. The wage protected by the law is regarded by most, particularly the recipient, as a wage he is entitled to, and that he has earned. A supplement, however, is usually regarded as unearned, since

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21. Haveman [17], p. 55.

it does not come from the employer. In fact, the payment from the employer will be lower. The recipient may well resent his low wage, and regard the supplement as a form of welfare. The public is likely to resent bearing a burden it believes the low wage employer should be bearing. This will be particularly true if it is understood that low wage employers will have a lower wage cost as a result of the supplement, and even additional profits.

Third, under the supplement plan, all family heads aided remain in the same jobs. While their hourly income improves, nothing else changes. In contrast, under the HMW strategy, Federal funds are spent on inducing relatively high wage employment, offering opportunities for training and movement up the job ladder, union protection, and so on. In the above example, perhaps 2 out of the 5 million will move into better jobs.

Finally, under the supplement plan, additional profits are earned by low wage employers. Under the HMW strategy, subsidy goes to employers of all nonsupervisory employees, no matter how high their wage, as long as they meet the standards of the high minimum wage. Employers who pay low wages will not benefit under HMW.

E. COMPARISON WITH THE NEGATIVE INCOME TAX OR DEMOGRANT (NIT)

The negative income tax or demogrant plan is likely to be more efficient than either ES or HMW.[22] Unlike ES, there is no reason to expect the wage earned to be reduced. Once again, the efficiencies cannot be compared with certainty. Other aspects, however, are certain.

Under NIT, persons receive the maximum net transfer from the government if their earnings are zero. As their earnings in-

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22. Okner, Benjamin [30].

crease, the net transfer decreases until it reaches zero at the break-even level of earnings. As is well known, the NIT therefore reduces the reward from work. Each additional hour of work at a job paying $2.40 an hour will increase the income of the person significantly less than $2.40. Most NIT schemes reduce the hourly reward to less than 50% of the wage. Whether the high marginal tax rate will reduce work effort is uncertain.

The low wage worker who is willing to work is likely to prefer the Fair Labor Standards Act to the NIT. He is likely to regard the transfer as a form of welfare, since it is unearned income not paid for by his employer. He may feel the government is aiding him because of his inability to earn a living on his own. While the Fair Labor Standards Act is also a form of governmental assistance, he does not regard it as a handout, but as a means of forcing his employer to give him his due. It protects him against exploitation in the absence of a union.

The public is likely to feel the same way. One interpretation of the last presidential campaign is that much of the public regards the NIT as welfare that should not be given to persons capable of work. Even if the NIT limited payments to persons actually working full-time, many would still believe it was the responsibility of employers, not taxpayers, to provide a decent income for workers. Such a highly restricted NIT would, at least, not be accused of giving money to persons unwilling to work. The NIT plans that have been proposed, however, either require only the willingness to register for work or training, or have no work requirement whatsoever. It is well documented, and well known, that many who register for work are never put to the test; therefore, registration does not test the willingness to work.[23] Even if the NIT's high marginal tax rate does

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23. Levitan, Rein, Marwick [22].

not reduce work effort for the majority of recipients, the fact that a minority of able-bodied persons are able to receive transfers without working will be regarded as unfair by much of the public. Unless a guaranteed job program and a tough work requirement are added, the NIT will be unable to assure the public that payments are not being made to able-bodied persons unwilling to work.

In contrast, the minimum wage law has widespread acceptance with the public. The main opposition to the Fair Labor Standards Act comes from employers who are affected. Perhaps the public is less aware of the cost of the minimum wage to the consumer than of the cost of the NIT to the taxpayer. But probably more important is that the public believes that low-skilled workers should be protected from exploitation, and that employees are entitled to minimum standards from their employers.

A final contrast between NIT and HMW focuses on the Federal employment program. The NIT does not improve the job of a single worker. Funds are spent raising the incomes of persons in their current jobs. Under HMW, the Fair Labor Standards Act does this for free to the Treasury, and Federal funds are reserved to subsidize the creation of additional high wage jobs. In the illustration given earlier, 2 million of the 15 million low wage workers would advance to better jobs, averaging $3.00 an hour. Most of these 2 million are likely to be family heads, a significant fraction of the roughly 5 million heads among the 15 million. These 2 million would enter the high wage job ladder, receive union protection, and other fringe benefits.

It should be repeated once again that these contrasts between HMW and NIT apply only to households in which the head is capable of full-time work. All other households must be assisted by some kind of transfer program, such as NIT and cannot benefit from HMW.

F. COMPARISON WITH A GUARANTEED JOB OPTION (GJO)

It must be emphasized that the issue here is whether GJO is a substitute for a high minimum wage. A job opportunity can be guaranteed under the HMW framework by expanding the size of the Federal employment program, and perhaps supplementing it with residual jobs in special Federal projects. The feasibility of complementing HMW with a guaranteed job program is considered in Part III. The question here is whether the market wage effect of a GJO should replace a high minimum wage.

Earlier it was noted that even if such a GJO is administratively feasible, it may not be more efficient than HMW, since more jobs may have to be created under GJO than under HMW to get all family heads above $2.40. Under both HMW and GJO, the employer must pay family heads at least $2.40 to retain them. Under HMW, employers must also pay non-heads at least $2.40; they have no incentive to substitute non-heads for heads. Under GJO, however, employers will have the option of hiring non-heads at less than $2.40. Less heads will be offered regular jobs at $2.40 under GJO than under HMW, and more jobs will have to be created for heads under GJO. Since GJO will create no jobs for non-heads, unlike HMW, it is hard to tell which would be more efficient.

Implementing a GJO at a relatively high wage like $2.40 would not be easy. Several proposals for a guaranteed job program have unfortunately devoted little attention to how the jobs would be created.[24] Whether this can be successfully done cannot be pursued here. Because a high wage guarantee, particularly in the absence of a high minimum wage, will place a great burden on the guaranteed job program, it is likely that if a GJO is at-

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24. See U.S. Senate, Committee on Finance [53], or Packer [32].

tempted, it will at first be done at a lower wage, as proposed by the Senate Finance Committee.[25] The point here is that there is no need to wait until the especially difficult administrative problems of a high wage guarantee are solved, and such a GJO is successfully implemented. A Federal employment program less sweeping than a GJO will allow the minimum wage to be raised and extended, achieving the same reduction in poverty for roughly the same cost.

G. THE ROLE OF THE FAIR LABOR STANDARDS ACT

Under the HMW strategy, the FLSA would set a high minimum wage, and extend its coverage to nearly all workers. The new minimum wage enacted in the spring of 1974 moves in this direction, but is neither as high nor as extensive as proposed here. The new minimum wage will be increased in steps to $2.30 in 1976. A $2.30 minimum wage in 1976 will have roughly the same unemployment effect as a $1.90 minimum wage in 1973. Symmetrically, the proposed minimum of $2.40 in 1973 would be roughly equivalent to a minimum of $2.80 in 1976. Whether coverage should be made completely universal, or some exceptions allowed, is left open. While many of the current exemptions are explained simply by effective lobbying by particular employers, others are the result of a judgment that workers would be laid off, or small businesses would be forced into bankruptcy. If it is desired to preserve or encourage small business, it would be fairer to cut taxes on such businesses rather than exempt them from the minimum wage law.

Nevertheless, it must be recognized that some businesses will be forced to lay off a significant number of workers if a high minimum wage is suddenly applied. Even though the HMW strategy assumes that the Federal employment program is already

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25. The Senate Finance Committee proposed a maximum annual salary of $2,400 in 1972.

operating, and additional jobs are available, there is still the problem of transition for the workers laid off.

HMW calls for a significant reduction in exemptions, and staged elimination of those still allowed, so that a time table for universal coverage is established. When such coverage should be completed, however, requires careful consideration of the effects on employees and businesses.

While a modest minimum wage may be desirable on its own, a relatively high and extensive minimum wage is desirable only if its unemployment effect can be offset by a Federal employment program. The Fair Labor Standards Act must be used cautiously unless a Federal employment program accompanies it.

H. THE ROLE OF THE FEDERAL EMPLOYMENT PROGRAM

Although the Federal employment program has been presented as part of a strategy to raise low earnings, it, of course, does not depend on being complemented by a high minimum wage policy. While such a program enables the minimum wage to be pushed that much further, it, of course, directly benefits those who obtain high wage employment as a result of the program, regardless of what is done with the minimum wage. Without the minimum wage, however, such a program is bound to be inefficient as an anti-poverty device compared to the alternatives. From this viewpoint, such a program could be faulted for concentrating a great deal of money on relatively few low-income persons, while the majority of the working poor go unaided. Only when it is realized that such a program makes it possible to push the minimum wage further, without increasing unemployment, does its anti-poverty efficiency become comparable.

In the rest of this evaluation, the analysis will focus exclusively on the design of such a Federal employment program. While the Federal program is conceived as part of the strategy described above, the discussion will relate only to the design of such a program, and not to the use of the minimum wage. The analysis should therefore be relevant to those who favor a low

minimum wage, as well as to those who favor a high minimum wage policy.

Chapter 2

THE OBJECTIVE OF THE FEDERAL EMPLOYMENT PROGRAM

Before beginning the analysis of the design of the Federal employment program, its purpose must be clearly understood. Its objective is to increase employment above the minimum wage for a given level of aggregate demand, and therefore, inflationary pressure. If there is slack in the economy, employment can easily be increased by expanding aggregate demand through the usual tools of fiscal and monetary policy. Private employment can be increased through tax cuts and an expanded money supply; state and local government employment can be increased by general revenue sharing or other grants; Federal employment can be increased by greater Federal spending on Federal production.

The special challenge of the Federal employment program to be analyzed here is to induce an increase in employment that pays at least the minimum wage without an increase in aggregate demand. It attempts to induce more adequate-wage employment once aggregate demand can no longer be expanded because of the inflation constraint. This can be accomplished by increasing the output of above minimum wage producers, while decreasing the output of previously below minimum wage producers; and by inducing all producers to use more adequate-wage, nonsupervisory labor relative to other inputs.

The method of inducing both effects is to subsidize producers to increase such employment. The wage cost of truly additional labor must be effectively reduced to producers. A wage subsidy will reduce the price of labor to employers as long as the supply of labor is not completely inelastic. If the supply were completely inelastic, producers would simply bid up the wage until the increase offset the subsidy. The supply of labor to the high wage sector, however, should be highly

elastic because of the existence of low-wage and unemployed workers, who would be eager to enter the sector at the going wage or less, but who are prevented from doing so by restrictions on wage compttition in a significant fraction of the high wage sector. Evidence of such restrictions was cited earlier, in the discussion of the economic efficiency of HMW.

Thus, the subsidy should effectively reduce the cost of labor to relatively high wage producers. The lower costs incurred by high wage producers will enable them to expand output relative to previously below minimum wage producers, whose output will actually contract if a high and extensive minimum wage raises their labor cost. Further, the reduced wage cost will encourage all producers to use more of such labor relative to other inputs. Such shifts in factor proportions will be limited in the short run, but greater in the long run when producers are given time to alter their physical capital, and other inputs, in response to the new factor prices they face.

A reduction in the wage cost to employers is required to induce additional employment, even if the additional workers have the same skills and reliability as workers already employed (i.e. even if labor is homogeneous). The subsidy strategy does not depend on whether the program is directed at disadvantaged workers, or all workers. Diminishing returns will cause the marginal productivity of additional employees to decline, even if their skills are the same as current employees. Subsidy is needed to counter diminishing returns, regardless of the quality of additional workers.

It follows that if the increase in employment is to be permanent, the subsidy to additional employment must be permanent. This does not mean that particular employees must be permanently subsidized. It means that whenever subsidy is terminated on one set of employees, subsidy must be applied to an equal number of new hires. Whether the old trainees or employees are retained once their subsidy ends will not be determined by whether they have mastered their jobs; it will be determined by whether any unsubsidized, regular job slots have opened up. If such vacan-

cies do not occur, then these persons will be laid off when their subsidy ends.

Alternative Federal employment programs designed to treat the problem of low earnings will be judged on their performance under an aggregate demand, or inflation constraint. To the extent they improve earnings and employment simply by increasing aggregate demand, they contribute nothing new to standard policy. If there is slack in the economy, standard tools are readily available. What is needed is a new instrument that will increase employment even after the constraint becomes operative.

If the economy is at its target level of aggregate demand for goods and services, both private and public, then the introduction of the Federal employment program, like any government expenditure, would push the level of aggregate demand beyond its target unless it is offset by an equal reduction in aggregate demand. This can be achieved by an appropriate increase in taxes to finance the program, or a cutback in other government expenditure. The Federal employment program must be judged by whether it induces a net increase in employment, even when it is offset by taxes or cutbacks so that aggregate demand is held constant. If relative factor prices faced by producers in the economy are shifted in favor of nonsupervisory labor by the program, then it should result in a significant net increase in employment, even when offset.

In contrast, if an ordinary Federal expenditure - which does not alter factor prices for producers - is appropriately offset by taxes or an expenditure reduction, then employment will remain approximately the same. It follows that if a Federal employment program is shown to be equivalent to general revenue sharing, or an unconditional grant to producers in either sector, then if it is appropriately offset, it will not induce a significant net increase in employment. Like general revenue sharing, such a program gives no special stimulus to employment; the offsetting policy will therefore decrease employment by roughly the same amount.

The Federal employment program, therefore, must do consider-

ably better than general revenue sharing. If the program is shown to be equivalent to general revenue sharing, it is not what we are seeking. Such a program will not be able to increase employment without increasing aggregate demand, and violating the inflation constraint.

Chapter 3

THE FUNDAMENTAL PROBLEM OF MAINTENANCE OF EFFORT

The aim of the Federal employment program is to induce independent agents, either public or private, to do more of what they are already doing - namely, employing nonsupervisory personnel at above the minimum wage. Whenever the Federal government tries to induce these independent agents to increase some activity they are already performing, the problem of maintenance of effort arises. What is to prevent the independent agents from reducing their own effort, and substituting Federal funds for their own without genuinely increasing the particular activity?

While the maintenance of effort problem is familiar to most persons in government, its seriousness is often underestimated. It is usually assumed that, yes, there is a maintenance of effort problem but, no, it does not seriously undermine the basic objective of the grant program. Administrators proceed in the belief that the program is still doing some good, in spite of this problem. Yet, in most cases, there is little basis for such confidence. It is often likely that the program is in fact being undermined.

An example will illustrate the problem. Suppose a local government would employ 100 persons above $2.40 an hour if there were no Federal program. Suppose the Federal government offers to pay the salaries of five additional employees, at $6,000 each. In the first year, the program will succeed, if it was not anticipated by the local government. Having 100 employees on board at the time the program is introduced, the local government adds five additional persons to bring its total to 105, receiving $30,000 from the Federal government.

If the program is a permanent one, however, the Federal government will offer to fund five persons (at least) in succeeding

years as well. Once the local government anticipates the Federal grant, the problem becomes serious. Suppose the local government would have employed 105 persons in the following year without the Federal grant. It can claim that it would have remained at 100, and use the Federal grant to fund five persons who would have been employed anyway. The $30,000 saved can be spent on other things, or returned to the locality in the form of less taxes. The Federal government may believe it has succeeded in increasing employment by five. The local government will label five employees as grant recipients, as if to verify this.

Yet the Federal grant, earmarked to increase employment, has been converted into an unearmarked grant of $30,000. The grant has been decategorized. The effect on employment will be no greater than the effect of $30,000 in general revenue sharing. The local government may spend some of this money on increased high wage employment, but it is also free to cut taxes, or spend the funds on other things.

Of course, Federal grant programs are aware of this process, and try to prevent it from occurring. Nearly all programs of this kind use maintenance of effort regulations to try to stop such substitution. A most relevant example are the guidelines for the Public Employment Program, authorized by the Emergency Employment Act of 1971. They read as follows:

> Maintenance of Effort
>
> Section 12(a)(1) of the Act prohibits the Secretary from granting funds unless he determines that the program:
>
> 1. will result in an increase in employment opportunities over those which would otherwise be available;
> 2. will not result in the displacement of currently employed workers, including partial displacement such as a reduction in the hours of non-overtime work or employment;
> 3. will not impair existing contracts for service or result in the substitution of Fed-

eral for other funds in connection with work that would otherwise be performed.[1]

The intent is clear. The question is whether these provisions work in practice. The Emergency Employment Act of 1971 (EEA) which authorized the Public Employment Program (PEP) became law on July 12, Congress appropriated funds on August 9, and the grants were made during the next few months. In its first year, therefore, PEP funds were granted to program agents after these agents had passed their own budgets for that fiscal year. This made it difficult for the agents to respond to PEP by adjusting their own budgets. The fact that PEP was largely unanticipated helped to enforce the maintenance of effort provisions.

In the second year, however, program agents realized that PEP would probably be refunded at roughly the same level as in the first year. As a result, agents were able to take PEP into account in planning their budgets for the fiscal year July 1972 to June 1973. Consider the case of a typical local government. When PEP was introduced, it had 15 recreation employees in that department, and, under PEP, it added a 16th. Suppose that in the following year it would have added a 16th recreation worker, had there been no PEP program. With PEP, it would almost certainly continue to fund only 15 slots from its own revenues, and continue to have the 16th slot funded by PEP. It has invisibly converted the PEP grant into general revenue sharing.

None of the Manpower Administration project officers whom I interviewed even attempted to investigate this kind of substitution. The only maintenance of effort violation they watched for was direct, overt substitution - the lay-off of a regular employee in order to replace him with a PEP employee. They felt that trying to detect the indirect substitution described above would be a futile exercise.

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1. U.S. Department of Labor [45], pp. 34-35.

They are right. The crux of the problem is that a hypothetical is involved. We need to know what the program agent would have done, this year, had there been no Federal program, but in fact did not do, since there is a Federal program. The problem is not simply to discover the agent's intentions. The problem is that the agent need never have formulated its intentions. It is likely that there is nothing to discover. What must be grasped is that the program agent need never decide what it would have done without the Federal program once the program is in operation. In most cases, it can honestly respond that it has nothing to reveal.

Maintenance of effort provisions, enforced by adequate supervision, can restrain direct substitution. This creates the impression that the regulations do work, and the problem is being contained. Yet it is indirect substitution - a process that cannot be prevented by current regulations - that is alone sufficient to seriously undermine the objectives of the program. Over the five years between 1967 and 1971, state and local government employment, without PEP, increased about 1.5 million, or an average of about 300,000 per year.[2] In 1972, a year of recovery from recession, the increase without PEP would undoubtedly have been greater than 300,000. Under PEP, about 160,000 jobs were funded. It would have been natural, and largely invisible, for program agents to finance about 160,000 less jobs from their own funds than they otherwise would have, and added the 160,000 from PEP. Since they would have been adding roughly as many jobs from their own revenues, this substitution would have gone unnoticed.

Each of the several program agents I interviewed during the first year of PEP, having been told to expect roughly the same

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2. U.S. President [52], 1973, Table C-29.

PEP funding in the second year, planned their budgets accordingly. Almost all of these local administrators were unaware that their planning violated the maintenance of effort regulations of the program. Yet, how can responsible administrators pretend PEP funds do not exist when they plan their budget, when they, in fact, know these funds are available? Without such pretending, the maintenance of effort provisions will be violated.

While the logic of this process seems compelling, and is supported by discussions with public administrators who respond to grants, it would be desirable to test the hypothesis empirically. Such a test would not be easy, however. It would be necessary to develop a model to effectively forecast what state and local employment would be on the assumption that these governmental units receive $X in the form of unconditional grants. If the hypothesis is correct, then the model should also correctly forecast the response to $X of categorical employment grants, by treating such grants as if they were unconditional. Such a test is difficult because it depends on accurately forecasting the response to unconditional grants. It may be hoped that empirical studies will be successful in constructing such a model, and testing the hypothesis. Until this is done, it seems sensible to conclude that it is highly likely that many supposedly earmarked grants are in fact being substantially converted into unconditional grants.

If PEP funding were uncertain each year, and could not be anticipated, program agents would not be able to count on PEP, and effort would be better maintained. A policy of permanent uncertainty, however, entails serious costs. Suppose, for example, that PEP funds were not allocated until July, each year, after program agents had passed their budgets for the fiscal year. Late allocation in itself is not sufficient to prevent substitution if each agent is able to anticipate approximately what it will receive. In the second year of PEP, funds were allocated late, but each agent knew it would receive about what it got in the first year, and planned accordingly. To discourage substitution in planning, the program must actually surprise most agents;

it must allot them an amount they truly did not expect.

But this very condition - to catch them unprepared - obviously has severe disadvantages. It means that PEP jobs will be appended on to departments, rather than fully integrated into the job structure. It means that equipment, office space, and other supplies will not be set aside for the new employees. Nor will adequate supervision be planned. Furthermore, program agents will naturally resent this intentional uncertainty. For these and other reasons, pressure has already developed to fund PEP one year in advance. Senator Cranston's expanded public service employment bill contains the following sensible provision:

> Section 4(d) For the purpose of affording adequate notice of funding available under this Act, appropriations under this Act are authorized to be included in the appropriations Act for the fiscal year preceding the fiscal year for which they are available for obligation.[3]

Whether or not advanced funding is adopted, this proposal reflects the costs of the uncertainty that has accompanied PEP funding. It suggests that an attempt to increase uncertainty in order to limit substitution is a self-defeating policy. Another way must be found to maintain effort.

It should be noted that the maintenance of effort problem applies to regular Federal agencies as well. If these agencies are subsidized to increase employment, they will also plan their own budget requests with this in mind. The Office of Management and Budget, and Congress, will be unable to determine what the agencies would have requested had there been no Federal employment program. As long as the agency has its own objectives, it will act like any other independent agent.

It would be possible to create a special Federal agency - perhaps called the Federal Projects Administration - whose sole purpose would be to create jobs. If such an agency were funded entirely through the Federal employment program, according to the number of persons it employed, then there would be no maintenance of effort problem. While such an agency might be useful to

some extent, particularly as an employer of last resort in a guaranteed job program, its projects must not replace work that would have been done by regular public or private producers. As a result of this restriction, more meaningful and useful work will be induced if the Federal employment program relies primarily on inducing regular producers, public and private, to use more labor relative to other inputs.

A. OPEN-ENDED VS. CLOSED-ENDED GRANTS

The aim of the Federal employment program is to induce producers, faced with a given product demand, to increase above-minimum-wage employment. The method is to reduce the cost of additional labor to producers by subsidizing the wages of employees. Because of the maintenance of effort problem, however, the design of the Federal subsidy - whether it is open or closed-ended - will usually determine whether the cost of additional labor is effectively reduced, and the incentive to shift factors and expand output actually created.

Under a closed-ended design, the maximum amount each program agent can receive is effectively limited. Under PEP, the Federal government subsidizes 90% of the wage, but the amount of subsidy is limited. Each program agent is allotted a maximum amount, which depends on the unemployment in its jurisdiction. The ceiling is effective, rather than merely nominal, since all program agents requested their maximum, and most would have requested more, had they not been limited. Under an open-ended design, a program agent is free to request as much aid as it wants, provided it puts up its matching share. Under the WIN tax credit, private businesses receive a tax credit equal to 20% of the wage for each welfare recipient they employ. While there is a nominal ceiling on the credit a business can earn, it is not likely to be effective for most businesses; it is higher than most businesses would freely request, given the productivity to them of additional welfare recipients, and the fact that they must pay most of the wage. The WIN tax credit is effectively open-ended for most businesses;

since the ceiling does not restrict their free choice, an additional WIN employee would cost them less than his wage. In contrast, under PEP, since the ceiling is reached, an additional employee beyond this costs the program agent the full 100% of the wage.

If there were no maintenance of effort problem, either design would induce an increase in employment. Because of the seriousness of the maintenance of effort problem, an important conclusion emerges: only the open-ended design guarantees that the cost of truly additional labor will be effectively reduced; therefore, only the open-ended design insures that there will be an increase in employment relative to other inputs.

To see this, consider a program agent that would have hired 105 employees without the Federal employment program, and last year hired 100. If it receives a closed-ended grant of $6,000 per employee for a maximum of five employees, it will use the subsidy for the five it would have hired anyway. A truly additional employee - the 106th - would still cost it 100% of the wage, since the ceiling has been reached. While it has $30,000 more in revenue due to the grant, the cost of truly additional labor has not been reduced, and there is no reason to expect the agent to employ more labor relative to other inputs. Suppose, in contrast, that the grant were open-ended, and that the subsidy was $3,000 per employee, without limit. The agent would again use Federal funds for the five employees it would have hired anyway, this time substituting $15,000 instead of $30,000. A truly additional employee - the 106th - will now cost the agent $3,000 less than the wage; the same is true for each additional employee. The cost of additional labor is effectively reduced, and the agent will increase employment relative to other inputs if it is given time to adjust. Suppose the agent hires 110 employees. This will cost the Federal government the same $30,000 that accomplished nothing (except general revenue sharing) under the closed-ended design.

If the maintenance of effort standard had been set at 105, instead of 100, then both designs would have increased employ-

ment. In practice, however, serious leakage is inevitable, under either design. The virtue of the open-ended design is not that it overcomes the maintenance of effort problem, but that it alone guarantees a genuine increase in spite of this problem.

The example brings out another crucial difference: the open-ended design can always achieve the same increase in employment for significantly less money than the closed-ended design. Suppose the maintenance of effort norm had been set at 105, so that the closed-ended design did achieve an increase of five employees, to 110. If the ceiling is effective, and not merely nominal, the agent would have wanted to hire more than five at a subsidy of $6,000 per person. In the example, it was assumed that $3,000 per person would accomplish this. Whenever an agent wants to go beyond the ceiling at the going subsidy rate, it could have been induced to reach the ceiling at a lower subsidy rate.

The magnitudes are likely to be significant. Under the PEP subsidy rate of 90%, every program agent in the country requested its maximum limit. This means that nearly every program agent would have hired the same number of persons at a lower subsidy rate. In its first year, when PEP did do better than general revenue sharing because it was unanticipated, under an open-ended design PEP might have achieved the same increase at perhaps half the cost. While this is only conjecture, the fact that every program agent requested its limit at a subsidy rate of 90% suggests that the rate could have been reduced significantly before most agents would request less than the original limit.

The attraction of the closed-ended design with a high subsidy rate, on the other hand, is that it makes sure that funds are allocated to public program agents according to the unemployment in their jurisdictions. The high subsidy rate enables each program agent to accept its maximum allotment. The ceiling on the grant prevents any program agent from receiving more than its proper share. The closed-ended design not only achieves a fair allocation among program agents; it achieves a fair distribution of assistance among the unemployed in different juris-

dictions.

Unfortunately, fairness is of little use if the goal of the program is not attained. Because of the maintenance of effort problem, the closed-ended grant will induce little if any relative increase in employment; it will hardly do better than general revenue sharing. Since the open-ended design is essential to achieve the objective of the program, a method must be found to bring about a fair allocation among jurisdictions under the open-ended design.

If each public program agent faces the same subsidy rate under the open-ended design, funds will not be allocated to jurisdictions in proportion to the number of unemployed. The response of each program agent will differ according to the size of the agent, and its elasticity of demand for labor. There are several possible responses to an undesirable allocation of funds. Under the first, the subsidy rate could be raised for program agents that responded too much. Unfortunately, this would create the incentive for program agents to under-respond in order to receive a higher subsidy rate. Also, the fairness of rewarding a poor response, and penalizing a good one might be questioned.

Under the second, the program would be expanded to include other producers in the jurisdiction besides the single public program agent. Even if the local government responds poorly, other producers may take up the slack. The greater the number of producers eligible for the program, the less will be the impact of the local government's response on the total response of the jurisdiction. If the response of the jurisdiction is low relative to the number of unemployed, then the subsidy rate could be reduced. As long as the number of participating producers is too large for successful collusion, no producer will have an incentive to respond poorly to try to affect the subsidy rate in the following year, since no single producer will be able to control the area's response, which alone will determine the subsidy rate.

Under the closed-ended design of the PEP program, each public program agent was required to hire persons who lived within

its jurisdiction. Under the open-ended design, competition among program agents is important to prevent collusion. Program agents should be prevented from hiring only persons who live in its jurisdiction. Thus, within any labor market area, even if the program is restricted to the public sector, there will be several local governments, as well as state and Federal agencies. The number should be large enough to prevent collusion, and intentional under-responding. Even if several of the public program agents respond poorly, the others may take up the slack. As long as all jobs are open to persons regardless of their residence, persons in the jurisdiction of a program agent that responds poorly will have the same opportunity for employment. Competition among employers for subsidy is further increased if non-profit organizations are included, and, finally, if private businesses are included.

The varying of subsidy rates among regions, sub-regions, and even labor market areas (defined for administrative purposes according to political boundaries) will enable Congress to achieve any allocation of funds among areas that it desires. As long as individual program agents are unable to control the subsidy rate that applies to them, intentional under-responding will not be tried. The existence of more than a few program agents in the same administrative area, all facing the same subsidy rate, with the rate determined by the aggregate response of all program agents, should guarantee sufficient competition. Rather than try to equalize the ratio of jobs created to number of unemployed in each area, it might be reasonable to settle for a lower ratio in areas that require a high subsidy rate, and a higher ratio in areas that require only a lower rate. The important point is that under the open-ended design, Congress can achieve whatever allocation of funds among areas it desires.

It must be emphasized that program cost can be controlled under an open-ended design. The subsidy rate should be set so that the expected response will generate the total Federal expenditure that is desired. If the subsidy rate is set low enough, even a very small program cost can be achieved. It is true that

there will be some variance of actual cost around the target under an open-ended design. In contrast, a closed-ended design has the advantage of certainty. Once a given program has been in operation, however, the relationship between the Federal subsidy rate and program cost will be able to be estimated with reasonable accuracy. If high priority is set on not exceeding a certain cost, the Federal subsidy rate can be set sufficiently low so that the probability of exceeding this cost is very small.

The open-ended design is the rule, not the exception, on the revenue side of the Federal budget. The Federal government could be more certain of its revenues if it set actual tax liabilities for each taxpaying unit at the beginning of each year. Instead, however, it sets tax rates. The unit's tax liability depends on what its tax base turns out to be. Tax rates are set so that estimated revenues are as desired. Because uncertainty characterizes the entire revenue side of the budget, there does not seem to be a valid reason for refusing to admit some uncertainty on the expenditure side.

The uncertainty of the exact program cost under the open-ended design must be weighed against the certainty that it is more effective. How much more effective depends on the price elasticity of the demand for labor of program agents. If program agents do not respond to a cut in the wage, then the open-ended design is no better than the closed-ended design or an unconditional grant. If the price elasticity, even in the long run when time for full adjustment is allowed, is assumed to be zero, the conclusion should not be to choose a closed-ended design, but rather, to abandon the Federal employment program altogether.

Unfortunately, estimates of the price elasticity of the demand for labor are unreliable for estimating the effect of a Federal employment program with an open-ended design. Some estimates have been attempted in several empirical production func-

tion studies.[4] Besides the difficult econometric probeems involved, the expected response to a wage cut via a Federal subsidy depends crucially on how the program is administered. If the cost to the agent of participating in the program, undergoing supervision, having its books inspected, and so on is high, then the nominal subsidy rate overstates the effective reduction in cost.

In spite of these difficulties, the econometric studies assert that the long run price elasticity of demand for labor is positive.[5] If these studies are correct, then as long as the participation cost does not exceed the subsidy, the net subsidy will be positive, and there will be an increase in employment. No matter how great the participation cost, it is true it can always be offset by a large enough subsidy. The higher the gross subsidy, however, the greater the cost of the program. The way the program is administered therefore becomes very important. Since the participation cost is spread over relatively few additional employees, participation will not be worthwhile unless the cost is low, or the subsidy, high. Alternative methods of administration will be considered later.

Experience with PEP and JOBS, however, suggests that the participation cost should be able to be kept low enough to achieve a positive net subsidy when the gross subsidy is less than 100% of the wage. Both programs have a high participation cost, involving negotiation, contracts, direct supervision, and inspection. Nevertheless, both programs elicited response. In the first year of PEP, when there was little substitution of funds because the program was unanticipated, the strong universal res-

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4. See Footnote 15, Chapter 1, Part II , p. 110.

5. See Footnote 15, Chapter 1, Part II , p. 110.

ponse from all program agents suggests both a positive net subsidy, and a positive elasticity of demand for labor. The fact that quite a few private employers are willing to put up with the very high participation cost of the JOBS program implies that the gross subsidy for a small number of additional employees offset the participation cost, for at least a fraction of the private sector.

B. THE OPEN-ENDED DESIGN AND MAINTENANCE OF EFFORT

While an open-ended design should be utilized in the Federal employment program, for the reasons given, its adoption raises the maintenance of effort problem with new urgency. When the design is closed-ended, each program agent is strictly limited in the amount it can receive, and therefore, the amount it can substitute. Even if there is no attempt to maintain effort, abuse is limited by the ceiling. Under the open-ended design, in contrast, there is no limit to substitution. It becomes essentail to set an enforcible maintenance of effort norm for each program agent.

The setting of this norm, however, is bound to be more controversial under an open-ended than under a closed-ended grant. Under the closed-ended design, the position of the norm does not affect the amount the program agent will receive. In the earlier example, the agent will receive $30,000 for five employees whether the norm is set at 100, or 105. Under the open-ended design, the position of the norm does affect the amount the agent will receive. If the norm is set at 100, the agent will receive $30,000 for ten employees; if it is set at 105, the agent will receive only $15,000 for five employees.

The decision to use an open-ended design therefore requires a method for setting the norm that is regarded as reasonably fair. This problem is avoided by the use of a closed-ended design, where abuse is limited by the ceiling on the grant rather than the maintenance of effort norm, and where program agents care less about such a norm because it does not affect the size of

their grant. Unfortunately, the open-ended design, not the closed-ended one, is necessary to accomplish the goal of the program. The need to develop a method of setting a norm for each program agent cannot be escaped.

Before considering an alternative to current maintenance of effort regulations, it will be instructive to examine how the maintenance of effort problem is handled under the investment tax credit.

C. COMPARISON WITH THE INVESTMENT TAX CREDIT

The investment tax credit, like most tax credits, raises the same maintenance of effort problem, although this is not always recognized. The investment tax credit is particularly appropriate for comparison. Just as the Federal employment program seeks to induce increased utilization of one factor of production - labor - the investment credit seeks to induce increased utilization of another factor of production - capital. The problem arises because the purpose of the credit is to induce private businesses to do more of what they would already be doing - namely, purchasing capital goods. Ideally, the Federal government would like each business to reveal how much investment it would have undertaken without the credit, and to "maintain this effort" without subsidy. Then the Federal government would offer a credit only on investment beyond that point. In practice, of course, this is impossible.

Yet the investment tax credit originally proposed to Congress by President Kennedy in 1961 did attempt - although incorrectly - to more closely approach this ideal than the program that was finally enacted. The current investment tax credit is a credit on gross investment in the form of machinery and equipment. The tax liability of a business is reduced by an amount equal to 7% of all investment in this category undertaken in the given year. The original proposal was a credit on net investment. Only investment in excess of current depreciation would earn the business credit. In his message to Congress, the Presi-

dent explained the reason for proposing a credit on net, rather than gross, investment:

> In arriving at this form of tax encouragement to investment, careful consideration was given to other alternatives. If the credit were given across the board to all new investment, a much larger revenue loss would result from those expenditures which would have been undertaken anyway or represent no new level of effort. Our objective is to provide the largest possible inducement to new investment which would not otherwise be undertaken.[6]

The logic behind this strategy is as follows: Suppose a given business would have invested $500 if there were no credit. Additional investment beyond this point would not be profitable. Suppose the credit makes an additional $100 of investment profitable to the business. Clearly, it should not matter whether the credit applies to all $600 invested, or only to the additional $100. The decision has already been made on the first $500. Either form of the credit provides exactly the same stimulus to investment beyond $500, and should therefore lead to the same result.

In practice this conclusion may have to be qualified. The logic assumes that the sole determinant of investment is the prospective rate of return. The availability of internal funds to finance the investment may also be a determinant, if the business prefers internal to external financing. The gross credit is equal to the "incremental credit" on truly additional investment plus an unconditional grant equal to 7% of the investment that would otherwise have been undertaken ($500). Thus, the gross credit will increase the availability of internal funds by the amount of the unconditional grant component, and may therefore induce a greater increase in investment than the incremental

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6. U.S. House of Representatives, Committee on Ways and Means [48], p. 6.

credit. Nevertheless, if the expected rate of return is more important than the availability of internal funds, then the Treasury will achieve a greater increase in investment for a given revenue loss by restricting the credit to truly additional investment, and offering a higher percentage.

Net investment was regarded as a proxy for truly additional investment, in the original 1961 proposal. The assumption was that the investment undertaken by a business in any given year without the tax credit would almost always be greater than its depreciation. According to the above logic, investment up to the level of depreciation should therefore not be subsidized. Unfortunately, a net investment credit would not provide the same stimulus to investment as an ideal incremental credit.

The reason is that under a net investment credit, an additional dollar of investment this year means one less dollar of net investment in future years. This is because the additional dollar of investment this year will be depreciated gradually in future years. Thus, under a net investment credit, an additional $100 invested this year will reduce taxes this year by $7. But in future years, the tax credit received will be $7 less than it otherwise would have been as the asset is depreciated. Some incentive will still be provided, because $7 today is worth more than $7 in future years. But most of the stimulus is undermined.

The net investment credit does not achieve its objective because investment this year affects the maintenance of effort norm - the level of depreciation - in future years. Under an ideal incremental tax credit, the maintenance of effort norm each year is established by our perfect knowledge of what the business would have invested had there been no credit. The actual investment of the business in any given year would have no effect on where the norm would be set in future years. Thus, the business would invest according to the expected return of this year's investment, without weighing - as in the case of the net investment credit - the effect of this year's investment on the maintenance of effort norm in future years, and therefore,

the tax credit in future years.

While there are serious practical difficulties in implementing an effective incremental tax credit, the aim should be clear. It semms wasteful to subsidize all investment, since most of it would have been undertaken anyway. If the subsidy took the form of explicit direct grants instead of tax credits, then the need to try to maintain effort would no doubt have been recognized. A Grants for Investment Act would probably include the following regulations, parallel to the Public Employment Regulations cited earlier:

Maintenance of Effort

> The Grants for Investment Act prohibits the Secretary of Commerce from granting funds unless he determines that the program:
>
> 1. will result in an increase in investment over that which would otherwise have been undertaken
> 2. will not result in the substitution of Federal for other funds in connection with investment that would otherwise have been undertaken.

It is estimated that in fiscal year 1973, the investment tax credit involved a revenue loss of roughly $3.6 billion.[7] It is likely that most of this revenue was foregone in order to subsidize investment that would have occurred anyway. In 1972, fixed investment in producers' durables was $88 billion.[8] (The investment credit applies to most of this investment.)[9] According to econometric estimates, it is unlikely that more than $8 billion of investment in 1972 was due to the investment tax credit; equivalently, it is likely that at least $80 billion

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7. Cited in Surrey [36], p. 76-78.
8. U.S. President [52], 1974, Table C-13.
9. Pechman [33], p. 127.

would have occurred without the credit.[10] Thus, it is probable that most of the $3.6 billion foregone by the Treasury simply replaced private funds that would have been invested.

It is instructive to compare a gross investment credit with an incremental investment credit. As already explained, if the incremental credit uses the level of depreciation as a norm, then most of the incentive is undermined. A net investment credit, however, is not the only incremental investment credit. If the incremental credit uses a criterion to set the norm that is independent of past investment by the business, it can avoid the pitfall of the net investment credit, and provide a stimulus comparable to that of the gross credit. Nevertheless, important differences between the gross credit, and such an incremental credit will remain.

First, and most simply, businesses will receive a greater subsidy under the gross credit. This is probably the main reason why Congress passed a gross credit, rather than some kind of incremental credit, in 1962. While this difference does much to explain the contrast in political appeal, it is hardly a justification.

The second difference, however, focuses on the most serious drawback of an incremental credit (or direct grant) in contrast with a gross credit (or direct grant). Under the gross credit, an implicit norm of zero is set. Such a norm seems natural when recognized, and is often invisible. It does not seem to require justification. Any other norm, however, is visible, and does re-

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10. In [37], Paul Taubman cites estimates of the effect of the credit by two econometric models: The Wharton Economic Forecasting Model, and the Data Resources Model. The Wharton Model estimated that two years following its enactment, the credit would be increasing investment by $1.0 billion annually. The Data Resources Model estimated that at the end of two years, the credit would be increasing investment by $5.7 billion annually. While the difference in the estimates does not inspire confidence, $8 billion should be a fairly safe upper limit.

quire justification. If policy makers had perfect knowledge of what each business would invest were there no program, then justification would be easy. Without such knowledge, any criteria are bound to be somewhat arbitrary and imperfect, and at least some inequities are inevitable.

The toughest obstacle to implementing an incremental tax credit or grant is the setting of the maintenance of effort norm. If policy makers had perfect knowledge, they could simply set the norm equal to the amount of the target activity that each program agent would otherwise have undertaken. In the absence of such knowledge, a method must be found that is tolerably fair, and administratively feasible. Whether this obstacle can be overcome will now be considered.

D. AN ALTERNATIVE APPROACH TO MAINTENANCE OF EFFORT

Current maintenance of effort provisions are ineffective. Because the Federal employment program must use an open-ended design if it is to accomplish its goal, an alternative technique for maintaining effort must be devised. The gross investment tax credit makes no attempt to maintain effort, and in effect simply uses a zero norm. This choice is difficult to defend for the investment credit, and would be impossible to defend in a Federal employment program, where the leakage from subsidizing all employees would be enormous.

The strategy in the alternative approach is to predict what the subsidized activity would have been, had there been no subsidy, by examining the actual values of variables related to the subsidized activity. For example, suppose that, prior to the subsidy, the ratio of labor cost to non-labor cost in each program agent were always 2:1. Then, once the employment subsidy is in effect, presumably this ratio will increase. Yet the norm could be set by assuming that labor cost would have been twice the non-labor cost that actually occurs. Unfortunately, such simple, fixed relationships cannot be expected to exist.

One step in improving the prediction for an individual pro-

gram agent is to utilize base period values. In the year prior to the introduction of the employment subsidy, program agent A may have used a higher ratio of labor cost to non-labor cost than program agent B. Clearly, this information can be used to improve the accuracy of the prediction, once the subsidy is in effect.

A single variable, such as non-labor cost, is unlikely to be an adequate predictor of the subsidized activity. Careful empirical analysis is required to select the set of variables that best predict the number of non-supervisory employees. Data generated by program agents in recent years should be used to develop the index. Using regression analysis, it may be possible to select a set of independent variables that predict reasonably well the dependent variable - nonsupervisory employment. The formula implied by the regression equation would be made available to all program agents. Each agent would be able to compute its own norm for a given year by applying the formula to its own actual values for the variables in the formula.

How accurate a maintenance of effort index can be devised must await empirical analysis, and experimentation with variables. Nevertheless, this approach should be able to meet its first test adequately - namely, whether it treats equitably program agents that are declining or staying constant in size. Since the norm can be set according to variables that measure whether the agent is growing or declining, a formula can easily be devised that gives the same opportunity to earn subsidy to both expanding and contracting agents.

The reasonable equity of this approach to maintenance of effort, and therefore its acceptance, does not primarily depend on the goodness of fit of the best regression equation. It depends on the notion that if agent A increases its non-labor cost by a greater percentage than agent B, than A can afford to increase the number of employees it finances on its own (assuming the average salary level changes similarly for both agents) by a greater percent than can agent B. Perfect fairness would require the norm to reflect exactly what the agent would have done. Tolerable

fairness requires the norm to reflect what the agent can afford to do. An index that requires program agents to finance more employees, the more their non-labor expenditures increase, should be regarded as tolerably fair.

Such an index should be reasonably fair and accurate when the program is first introduced, because the base period values should prove helpful as predictors. As time passes, however, some agents may diverge significantly from their norms; the number of persons they would have employed in nonsupervisory positions will differ significantly from the norm they are assigned. The more accurate the index, the less this will occur, but even the best index will not eliminate this problem. Agents who would have employed more than their norm will enjoy substituting Federal funds for their own. Agents who would have employed less than their norm may be unable to attain their norm, and will therefore earn no subsidy.

While this problem cannot be eliminated, steps can be taken to reduce inequity and leakage. It might at first be thought that the problem can be contained by simply raising the norm, in the following year, if the agent earns substantial subsidy, and lowering it, if the agent earns no subsidy. Unfortunately, this natural response would be equivalent to reducing the net subsidy, and reducing the employment effect of a given Federal expenditure. Each agent would realize that more subsidy this year will mean less subsidy next year, because next year's norm depends on this year's response.

The effective subsidy rate will be reduced as long as the adjustment of a program agent's norm next year depends on its own response this year. It follows that adjustment of a particular agent's norm must be independent of the behavior of that agent. In spite of this constraint, progress can be made. A second-best strategy is to adjust the norm for a group of program agents. Since all agents in the group will be treated uniformly, and the adjustment will depend on the behavior of the whole group, rather than the individual agent, then as long as the group is large enough to prevent collusion, group adjustments will not re-

duce the effective subsidy rate. The difficult task then becomes the placing of agents in the appropriate group.

The easiest grouping is geographic. A uniform adjustment of the norm can be applied to all program agents in a subregion, or preferably, in a labor market area. If the number of employees subsidized in the area is large relative to total employment in the area, then the norm might be raised uniformly for all agents. The adjustment can be made with the aim of equating the ratio of employees subsidized to total employment for all geographic areas. This ratio is only used for illustration. Another target may be more appropriate. Such an adjustment will prevent an unfair dispersion in benefits among labor market areas.

Within each labor market area, however, there are bound to be some agents enjoying substantial subsidy for employment that would have been undertaken anyway, while others earn no subsidy at all. If the program applies to the private sector, some industries may systematically do better or worse than average. Perhaps large or small agents will do better or worse than average. Groups defined by other characteristics may vary from the average. Variation by industry, and by size, will illustrate how this problem might be handled.

All agents might be placed in a four-digit census industry category. If total employees subsidized was large relative to total employment, for all agents in that category, then the norm would be raised uniformly for all agents in the following year. The adjustment can be made with the aim of equating the ratio of employees subsidized to total employment for all geographic areas. Once again, this ratio is only used for illustration; another target may be more appropriate. A finer industrial classification might be attempted. The gain in equity and reduction of leakage must be weighed against the increased administrative complexity. An alternative method of grouping would be to add a dummy variable for industry to the regression equation that determines the index.

Because size is a continuous variable, it might be more natural to achieve the grouping by adding this variable to the regression equation that determines the index. In this way, agents of different

size would automatically be treated differently.

Clearly, grouping - whether achieved explicitly, or implicitly by adding a variable to the index equation - will be controversial. Since the group into which an agent is placed determines its norm, agents will want a classification system that will give them a lower norm; they will want variables added to the equation that determines the index, that are likely to reduce their norm. Agents that feel the current grouping works against them will undoubtedly object that the program is arbitrary and unfair.

While any grouping will always favor some agents more than others, this does not mean that the grouping, or the variables used in the index equation, must be arbitrary. Objective standards can be devised to determine when a particular classification scheme is warranted. For example, suppose that dummy variables for industrial classification are statistically significant in an equation predicting the change in employment from its base period value. Then an industrial grouping would be objectively justified. Other statistical measures might be used to develop the groupings. Such groupings, or equation variables, should also have a common sense plausibility. Surely, labor market area, industrial classification, and size, are three plausible dimensions. While particular agents may object, these groupings would strike most as fair.

Perhaps most important, it must be remembered that the worst an agent can do under any grouping or index is to earn no subsidy; this is the agent's situation without any Federal employment program. The grouping system or index equation determines how much each agent will benefit from the program. A program that distributes only benefits, even if unequally, should be considered more acceptable by agents than one which distributes actual losses (the financing of the program may affect this, as will be discussed in the non-profit vs. profit section, later).

The more refined the grouping, or index, the smaller the leakage that will occur. Under such grouping, norms will approximate what the agent would have done for more agents than under

less refined grouping, where dispersion will probably be greater. Refinement should be pushed to the point where the additional gain in reducing leakage and increasing fairness is outweighed by administrative complexity.

The purpose of this section has not been to propose particular indices, or grouping schemes, but only to suggest the kinds of problems that will be encountered in attempting to devise a workable, tolerably fair maintenance of effort index. Such an index will have many imperfections, and its development will require careful empirical analysis and ingenuity. This alternative approach to the maintenance of effort problem, however, seems promising enough to warrant pursuit.

A lot is at stake. Since current maintenance of effort regulations do not work, most governmental grant and tax incentive programs are faced with the following situation. If a workable maintenance of effort index cannot be devised, then they must either accept large leakages, as in the case of the investment tax credit, or they cannot accomplish their objectives, and may as well be abandoned. Because the alternatives are grim, it must once again be emphasized that the index need not be perfectly fair to justify its use. The issue is whether an index can be devised that enables the program to be superior to either subsidizing activity that would have occurred anyway, thereby wasting governmental funds; or to abandoning the program altogether.

The high minimum wage strategy, and the design of a Federal employment program in this strategy to raise low earnings, stand or fall on the ability to adequately devise such a maintenance of effort index. It should be stressed also that the desirability of a relatively high and extensive minimum wage depends on its unemployment effect being offset by a Federal employment program. Unless such a program proves feasible, such a minimum wage may do more harm than good. Thus, the entire strategy depends on the ability to construct the maintenance of effort index. Whether this can be done awaits further efforts to construct such an index, and empirically test it.

E. SUBSTITUTION AND LAY-OFF BIAS AMONG EMPLOYEES

When the Federal government subsidizes independent agents to increase a specific activity they are already performing, they may not only reduce their own effort for the subsidized activity; they may also substitute the subsidized activity for a closely related unsubsidized one. Since they thereby reduce effort for the unsubsidized activity, such substitution is often called a maintenance of effort problem.

It is more useful, however, to realize that the problem is really one of defining the subsidized activity too narrowly. Once of the objectives of a subsidy program is to induce the recipient to substitute more of the desired activity for other activities. Thus, the Federal employment program seeks to induce producers to use more labor relative to other inputs. If a producer failed to maintain effort in its use of other inputs, this would not be considered a problem, but rather, a desirable result. If the producer, however, substitutes subsidized employees for unsubsidized employees, this may be undesirable.

Unlike the regular maintenance of effort problem, this one can be solved simply by broadening the category to be subsidized. If all nonsupervisory employees, rather than a subcategory of these, are subsidized, the incentive to substitute among employees is eliminated. Unfortunately, broadening the subsidized category also eliminates the possibility of providing special assistance to a special subcategory of workers.

Before proceeding, it is worth repeating that subsidy is needed to induce additional employment, whether the subsidy applies only to a special, low-skilled category, or to all employees. The subsidy is needed to counter diminishing returns. The marginal productivity of labor declines, even if the quality of additional employees stays the same. While a larger subsidy will be needed if quality also declines, the subsidy strategy is justified, even if this is not the case, and the subsidy applies to all persons.

There is only one alternative to broadening the subsidized

category to include all persons. A quota of unsubsidized employees must be made immune to substitution. This can be done simply by requiring the program agent to maintain a specific number of unsubsidized employees. Any attempt to substitute a subsidized employee for one of these unsubsidized employees will not succeed, since the new employee will have to fill the quota, and therefore be ineligible for subsidy. Similarly, if employment must be cut back, the employer will not try to retain his subsidized employees, and lay off unsubsidized ones, since for each unsubsidized one who is laid off, a previously subsidized employee must lose his subsidy, in order to fill the quota.

Thus, the program agent must finance a specific number of employees not in the special subcategory, just as it must finance a specific number of employees in the special subcategory. It must maintain effort on non-designated employees just as it must maintain effort on designated ones. The above strategy, therefore, is equivalent to broadening the maintenance of effort requirement to include all employees. The only two possible alternatives can be stated as follows: Either the subsidy itself must be applied to all employees, or the maintenance of effort norm must be broadened to try to protect undesignated employees.

The merits of these two fundamental alternatives will now be evaluated. The issue is of great importance. Nearly every current or proposed Federal employment program directs subsidy at a special subcategory of persons, rather than all persons employed in nonsupervisory jobs. The WIN tax credit specifies welfare recipients referred by the WIN program; JOBS specifies new hires who are disadvanteged; PEP applies to previously unemployed or underemployed new hires, and requires some representation from various groups; various proposals recommend subsidy for heads of households, persons with low earnings in the previous year, and so on. Substitution among employees, like the maintenance of effort problem, is contained under a closed-ended design. Substitution among employees is limited by the number that can be hired under the grant.

When the open-ended design is used, however, the problem of

substitution among employees, like maintenance of effort, becomes urgent. Since the Federal employment program must use an open-ended design, for reasons given earlier, it becomes essential to know whether serious inequities can be prevented if only a special subcategory is subsidized. Can the second alternative - broadening the maintenance of effort quota to include all employees - work satisfactorily?

Suppose the subsidy is restricted to a subcategory of employees, but the maintenance of effort norm applies to all employees. For example, suppose that only new hires who are heads of households are subsidized. If the maintenance of effort norm applied only to heads of households, employers would have an incentive to substitute heads for non-heads. Under an open-ended design, required for program success, considerable substitution would occur, both direct and indirect. If the norm applies to all employees, however, the unlimited substitution is prevented.

The maintenance of effort norm means that the program agent is ineligible for subsidy on a specific number, or quota, of employees at any point in time. These employees are safe from substitution, as long as the norm does not decline, thereby reducing the quota. Any employee who replaces one of these unsubsidized employees would also be ineligible for subsidy, since the quota must be maintained. If employment must be reduced, the employer will be indifferent between laying off a subsidized employee, and one of these unsubsidized employees. In either case, he will lose subsidy for one employee. If he lays off one of the unsubsidized employees, one of the previously subsidized employees will have to take his place filling the quota.

Whenever the norm declines, and the quota is reduced, however, some of the previously protected unsubsidized employees are no longer safe. They are in excess of the norm, and no longer needed to meet the program agent's quota. If the program agent holds total employment constant, it will have the incentive to replace these excess unsubsidized employees with persons eligible for subsidy. This, of course, is <u>substitution</u>. If the agent must reduce employment, it will prefer laying off these excess unsubsi-

dized employees, rather than subsidized employees. Hereafter, this will be referred to as lay-off bias.

Consider concretely what this would mean. Suppose a business is either in a declining industry, contracting in a cyclical downturn, or after a seasonal peak. Its change in non-labor cost calls for a decline in its norm. If employment must be reduced, who should be laid off? Since its quota has fallen, the program agent will have the incentive to lay off excess unsubsidized employees, rather than subsidized employees. The employee who is laid off may also be a head of household, and he will probably have greater seniority than the subsidized employees. The inequities and resentment will be serious.

Whenever the quota is reduced, an excess of unsubsidized employees will be created. These will be less valuable to the employer. He will tend to lay them off if employment must be cut, or replace them with subsidized employees if employment can be maintained. Only two responses are possible. Under the first, quotas would not be permitted to be reduced. Under the second, additional regulations would be introduced that tried to minimize the inequities resulting from reductions in quotas. Each will be considered in turn.

If quotas cannot be reduced, then new inequities and inefficiencies are created. The purpose of the maintenance of effort norm is to approximate what the program agent would have done without the subsidy. This is fair to program agents, as well as efficient in reducing leakage. If quotas cannot be reduced when the change in operating costs warrants it, then agents in declining industries will soon be eliminated from the program, since they will be unable to meet their initial quota. Agents declining in cyclical downturns will be eliminated. Even more serious, every agent with seasonal peaks will be unable to fill its quota during seasonal troughs, if absolute employment would have declined. The seasonal problem could be eliminated by changing the quota only once a year, and somehow setting the quota at the seasonal trough. Even if this could be done, serious leakage would occur, since employment throughout the year would have ex-

ceeded employment in the trough, anyway. These consequences of prohibiting decreases in quotas seem unacceptable.

The remaining alternative is to try to minimize the inequities that result when quotas are reduced. Perhaps the most serious inequity is when an employee with greater seniority is laid off or replaced because a subsidized employee is favored. While strong unions may be able to prevent this, many work sites do not have strong unions. The only way to prevent this is to cancel the subsidy of an employee if an unsubsidized employee of greater seniority is laid off. This regulation would eliminate the incentive to lay off an unsubsidized employee rather than a subsidized one of less seniority, since the subsidy would be cancelled as soon as the lay-off occurred.

Unfortunately, this regulation would have unacceptable consequences. Program agents must reduce employment, quite often, for either secular, cyclical, or seasonal reasons, and therefore lay off employees. If such lay-offs required subsidies to be cancelled, then many program agents would be frequently cancelling subsidies. When a subsidized employee was hired, it would be difficult to judge how long his subsidy would last. Agents with secular declines in employment would soon be allowed no subsidy. Without this regulation, declines in employment will usually be accompanied by declines in the agent's quota, so that the number of employees earning subsidy need not be reduced. This regulation would subvert that stability.

As long as subsidy is restricted to a subcategory of employees, there is no way to adequately protect unsubsidized employees from serious inequities. Broadening the maintenance of effort quota to include unsubsidized employees will not work, since the quota must frequently be reduced, leaving some unsubsidized employees vulnerable.

Unless we are willing to accept serious inequities, it will be necessary to apply the subsidy to all persons employed in non-supervisory jobs.

While categories such as disadvantaged, and welfare recipients, are obvious, it is often not realized that new hires is a

special category that invites substitution. If employers are subsidized for hiring additional employees, an incentive is created to replace current employees with new ones. Even if a maintenance of effort norm is used to protect current employees, subsidy will be attached to the new hires. If the norm must be reduced, the employer will prefer to lay off unsubsidized employees rather than the new hires.

The alternative to subsidizing employers for hiring additional employees, is to subsidize them for having a surplus of employees above a norm. The target of the subsidy would be the stock of employees on board, rather than the flow of new hires. If the surplus above the norm is subsidized, then distinctions among employees are finally eliminated. If employment must be reduced, when the norm is reduced, the subsidy earned is unaffected by who is laid off. There is no distinction between new hires and old hires.

Subsidizing the surplus of employees eliminates a problem that usually plagues employment and on-the-job training programs. Whenever the employees who are receiving subsidy can be specified, a time limit for the subsidy is usually set. It seems natural to require that a particular employee not be subsidized indefinitely. This view follows from the mistaken notion that the sole purpose of the subsidy is to offset lower quality. If this were the case, it would indeed be pointless to continue subsidy on an employee who has held his job successfully for a certain period of time.

The fundamental reason for the subsidy, however, is to offset diminishing returns to labor. The number of unsubsidized employees is limited, at any point in time, because of this, whether employee quality declines or not. When subsidy is terminated for an employee, he will only be retained if he can fill a regular unsubsidized vacancy. No matter how well he has learned his job, the level of unsubsidized employment will be determined by the diminishing marginal productivity of labor. If the employer retains this employee, it can only be in place of someone else.

Consider a stationary program agent. Without subsidy, it finds it worthwhile to hire 20 employees. With subsidy, it becomes worthwhile to hire 24. Suppose that the conditions that determine its level of employment do not alter. Suppose subsidy on the four new hires is limited to two years. At the end of the two years, four new persons can be hired, so employment will continue to be permanently increased to 24. Since unsubsidized employment remains at 20, the four previously subsidized employees can only be retained if four vacancies open up at the end of two years. Since the subsidy sustains employment at 24, but only if 4 new employees are added every two years, then 4 unsubsidized employees must leave every two years. If they leave voluntarily, through natural turnover, then there is no problem. This will not always be the case, however.

It is true that it would be possible to eliminate this problem by allowing employees to be subsidized indefinitely. If the original four new hires were subsidized indefinitely, then employment would also increase permanently to 24. There would be no need to worry about 4 positions opening up every two years. Whenever vacancies occurred among the unsubsidized 20 jobs - if ever - only then would new employees be hired. While this would be more sensible, it runs counter to the notion that the person is being subsidized only until he improves his skills. It also seems unfair to give particular persons the advantage of permanent subsidy.

When subsidy is no longer attached to particular persons - but depends only on the surplus of total employment above a norm - then the time limit problem vanishes. In the above example, suppose employment above 20 were subsidized, and this induced the hiring of 4 persons. No particular four persons have the subsidy attached to them. There is no need for vacancies to open up at periodic intervals in order to retain any of the 24 persons now employed. Thus, subsidizing the surplus eliminates the time limit problem.

Subsidizing the surplus above the maintenance of effort norm also eliminates the administrative problems of certifying eligi-

bility of particular persons for subsidy. No administrative machinery is needed to make sure subsidy is only earned on the designated persons. No employees are labeled as the subsidized ones. The possibility of stigma is thereby removed.

Subsidizing the surplus of employees, regardless of characteristics, removes the incentive for substitution, or lay-off bias. Ignoring employee characteristics does not mean that the program must fund employers who discriminate. All program agents seeking subsidy should be required to give evidence that they are in compliance with the Civil Rights Act and the standards of the Equal Employment Opportunity Commission. This could be done, perhaps, by requiring the program agent to submit figures on the race and sex composition of its workforce, and a brief statement why the figures are evidence that it is in compliance, when it files its annual request for subsidy. This could raise significantly the participation cost of an employer who blatantly discriminates, but should hardly affect the average non-discriminating employer. Only a small sample of program agents would be investigated.

If these anti-discrimination provisions eliminate agents that clearly discriminate from the program, then the equity argument for narrow categorization is weakened. If discrimination is not involved, then it may be unfair to give one group an advantage with subsidy. Why should someone who has not been on welfare be less attractive to employers than one who has, as under the WIN tax credit? Is it fair for a low-skilled white person to be at a disadvantage in finding a job because the subsidy is restricted to minorities, or the "disadvantaged?" Why should a person who seeks a better job be penalized because he already has one, and is not unemployed, and therefore ineligible for subsidy?

A reasonable reply is that discrimination will continue to be serious in spite of such provisions, and narrow categorization and substitution are needed to compensate for it. Indeed, the Federal employment program can be used solely as an anti-discrimination device. The aim would not be to increase the total number

of above-minimum wage jobs, but rather, to increase a particular group's share of fixed number of jobs. If this is the goal, then a closed-ended design is adequate, and preferable since it reduces undesirable substitution. PEP and JOBS may be viewed, not as programs designed to increase the number of jobs, but rather as programs to bring a greater share of the fixed number of jobs to the disadvantaged.

It must always be remembered, however, that if total employment is not increased, then the gain of one set of persons must be at the expense of another. If narrow categorization simply undid the effects of discrimination, equity would be on its side. Unfortunately, narrow categorization inevitably results in substitution most would consider inequitable. Why should a near-disadvantaged minority person, who perhaps was employed too often to qualify for subsidy, be leap-frogged over by a disadvantaged minority person, when a better job opens up, solely because of the subsidy? If all minority persons are subsidized, is this fair to the poor white family head who also has difficulty supporting his family? Should a person be laid off and replaced because the employer wants to earn subsidy? Although a regulation may prohibit this, suppose it is unenforcible, for the reasons given earlier?

There is one special category of persons that is particularly appealing in light of the goal of reducing poverty. That caregory is heads of households. If the Federal employment program restricted subsidy to heads of households, its anti-poverty efficiency would undoubtedly increase. The inequities of substitution and lay off bias are perhaps least in this case, since all persons who are the prime supporters of their families will never be at a disadvantage. Nevertheless, the difficulties endemic to special categorization persist here, as well. Later, in the discussion of the proposed Employment Incentive Program, the question of limiting the program to heads of households will be considered in detail.

There is a trade-off involved. Narrow categorization can improve the situation of the target group, but only by generating

serious inequities and resentment. If a closed-ended design is used to try to reduce undesirable substitution, there will be little genuine increase in employment because the cost of truly additional labor is not effectively reduced. A small program, and a small subsidy rate, will reduce substitution, and lay-off bias, but also reduce the impact of the program. A program with significant impact may generate enough opposition to undermine political support for the program.

The alternative approach eliminates the problem by subsidizing all employees. It offers less immediate and direct assistance to particular target groups. Broad categorization, however, may eventually do as much or more for these groups, for three reasons. First, an open-ended design can be used, inducing an increase in total employment. The target group will therefore be competing for a greater, not constant, number of jobs. Second, the absence of complex regulations requiring direct supervision means that a much larger number of program agents can be brought into the program, further increasing the number of jobs generated. Third, the absence of unfair substitution and lay-off bias should eliminate this source of opposition to the program, and increase the chance that it will be operated on a larger scale, and become permanent.

Chapter 4

THE NON-PROFIT VS. THE PROFIT SECTOR

Since the Federal objective is to induce a genuine increase in adequate-wage employment, it might be natural to assume that any producer, public or private, non-profit or profit, should be included in the program. Indeed, it will be shown that maximum efficiency for the Treasury, and probably for the economy requires the inclusion of all producers. A fair allocation of funds among areas is also aided by increasing the number of participating program agents. These, however, are not the only aspects that must be considered. The effect on income distribution must also be weighed. Since a program that includes the profit sector is likely to benefit the affluent much more than one that does not, there will be a trade-off between the efficiency and progressivity of the program, unless progressive financing is tied to the inclusion of the profit sector.

Exclusion reduces Treasury efficiency. Suppose that under an open-ended design - which earlier was shown to be more efficient than a closed-ended design - included producers increase total employment a certain amount. To induce a further increase in employment among these producers, the subsidy per employee would have to be raised. If the excluded producers are now included, however, they will further increase employment at the same subsidy rate. The original increase in employment can therefore be achieved at a lower subsidy per employee, since now the contribution from the excluded producers can be added. Thus, the Treasury can accomplish a given increase in employment for minimum cost if all producers are included.

Exclusion will also reduce economic efficiency, unless too many resources are already allocated to the excluded sector. Assume that resources are initially properly allocated between

the included and excluded sectors. This means that the marginal productivity of labor in the two sectors is roughly the same. Economic efficiency requires that each additional employee should work where his marginal productivity - his contribution to output - is highest. To achieve this, additional workers should be spread around among all producers so that the marginal productivity of labor declines evenly among all producers. If one sector is excluded, however, all additional workers will be added to the included sector. Marginal productivity in that sector will fall below its value in the excluded sector. If some of the additional workers were shifted, output would increase in value.

Marginal productivity would be the same among all producers if they all bought labor at the same wage, sold their output in a competitive market for a price, and tried to maximize profits. Under these conditions, each producer would hire labor until the value of its marginal product (its marginal productivity) just equalled its wage. While profit-making businesses often approximate these conditions, public producers neither sell their output for a price nor try to maximize profit. Without a market price, it is difficult to place a value on the marginal product of labor; and even if it could be so valued, the producer does not have the profit motive to hire labor until the value of its marginal product equals its wage.

It is therefore difficult to know whether the marginal productivity of labor is roughly the same in the public and private sectors; or more broadly, whether too many resources are allocated to one sector or the other. The efficiency of the current allocation of resources between public and private sectors is a complex topic in its own right, and cannot be pursued here. It must be realized, however, that exclusion is economically efficient only if the marginal productivity in the included sector is not simply initially higher, but also remains higher after all additional employees have been absorbed. If the Federal employment program is large enough to induce the absorption of 1 or even 2 million employees, the decline in marginal productivity

might exceed the initial gap. If the initial gap would be offset, efficiency requires that both sectors be included, but a lower subsidy rate be applied to the previously excluded sector.

Earlier, it was explained that to achieve a fair allocation of funds and jobs among areas, it will be necessary to vary the subsidy rate among areas. The lower the aggregate response of all participating producers in the area to subsidies, the greater the subsidy rate will have to be set to achieve a given target. If the number of producers in an administrative area is very small, collusion becomes possible. The producers can intentionally under-respond, in order to induce a higher subsidy rate for the following year. If the number is large enough so that even tacit collusion is unfeasible, then producers will respond properly to the subsidy rate.

A greater number of participating producers not only reduces the possibility of collusion; it also may reduce the variance in subsidy rates among areas. There may be a law of large numbers effect. If the program is restricted to a small number of producers, it may be that the mean response in each area will have a greater variance than if each area contains a large number of producers. The large number of producers reduces the ability of any small group with a high or low responsiveness to dominate the average, and thus, the subsidy rate required.

Even a public sector program which excludes all private firms - profit and non-profit - can be made sufficiently competitive to eliminate collusion. There are enough local governments, and state and Federal agencies in every labor market area to make collusion unlikely, even if a separate subsidy rate were set for each labor market area. If a single rate is used for a larger sub-region, collusion would be impossible, but there is an increased possibility that particular labor markets may receive less than a fair share. The principle should be that the administrative area should be large enough to prevent collusion, but beyond this, not so large that particular labor market areas within the area receive much less than their fair share. The federal program should require that all program agents hire per-

sons regardless of their residence so that job seekers can apply to any program agent in his labor market. It will probably not be possible to prevent local governments from favoring their constituents, but state and Federal agencies should pick up the slack in a jurisdiction where the local government creates few additional jobs.

Of course, inclusion of the non-profit sector will improve the allocation, and inclusion of the profit sector as well would be best of all with respect to this problem.

While treasury efficiency, and probably economic efficiency require including all sectors, the effect on the distribution of income must be weighed. In the earlier analysis of maintenance of effort, it was shown that significant leakage is inevitable, even if a maintenance of effort index replaces current regulations. A significant fraction of Federal employment program funds will be equivalent to unconditional grants for the program agents. The distribution of benefits from unconditional grants to private, profit-making firms is likely to favor the affluent significantly more than such grants to public, or even private, non-profit firms.

The incidence of an unconditional grant to the profit sector, the public sector, or the private non-profit sector is not a simple matter, but requires careful analysis. It seems likely, however, that much of the ultimate benefit from the grant in the profit sector will accrue to stockholders and managers of the firm, though some may accrue to workers, suppliers, consumers, and borrowers, if the grant is lent. In the non-profit sector, however, owners are unable to directly appropriate the grant. While managers' salaries may increase, it is likely that the grant will either finance additional output, or enable less taxes in the public sector. The increase in public output, which is distributed free, or less state or local taxes, are likely to benefit middle and lower income groups more than would equivalent unconditional grants to the profit sector.

If the program is restricted to the public, or even the non-profit sector, however, the loss in Treasury efficiency will be severe. The profit sector contains roughly 80% of the non-supervisory employment in the economy.[1] Instead of trying to absorb an additional 2 million into 45 million, the 2 million would have to be absorbed into only about 8 or 9 million. This would require a much larger subsidy per employee, and a much larger total cost for any employment objective. The anti-poverty efficiency of the program coupled with the minimum wage would almost certainly be less than the alternatives, though this approach still might be favored for other reasons.

It would be most unfortunate if the large efficiency gain of including the profit sector had to be foregone due to the effect on the distribution of income. A logical response to this dilemma is to include the profit sector, but to try to tax away as much of the private windfall as possible. How to best do this involves the complex problem of tax incidence.

Suppose that out of a Federal employment program expenditure of $5 billion, $2 billion was expected to be equivalent to an unconditional grant to profit-making corporations. Then one responsibility would be to partly finance the program by increasing the corporation income tax so that it raises an additional $2 billion in revenue. Unfortuanately, this may not be the most effective way to recapture the $2 billion. An asymmetry may be at work. When corporations receive income grants of $2 billion, they may pass little of it on to workers, suppliers, consumers, or borrowers. When after-tax profits are reduced due to an increase in the corporation income tax, however, they may respond in a way that succeeds in passing on most of the tax to workers, suppliers, consumers, or borrowers. The response of corporations to income grants, and income taxes, is a topic on which outstand-

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1. According to Table C-29, U.S. President [52], government had about 13 out of the 73 million wage and salary workers (excluding agriculture) in the economy.

ing economists differ 180 degrees.[2]

At any rate, the aim should be to see whether a tax that offsets the distributional effect can be tied to the Federal employment program. This would be a more sensible solution than excluding 80% of the economy, and seriously reducing the Treasury efficiency, and probably the economic efficiency of the program. If this cannot be done, a hard choice must be made between efficiency and progressivity.

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2. Pechman [33], p. 111.

Chapter 5

ADMINISTRATION, PARTICIPATION COST, AND EFFICIENCY

The method of administering the Federal employment program is not a mere detail. It is crucial to the program's impact. The central distinction is whether program agents are directly supervised by Federal project officers or whether, as under the tax system, program agents file claims for subsidy or tax credit without supervision, and only a sample are investigated. If our tax system required each taxpaying unit to be directly supervised, taxes would have to be raised from a small number of units. Similarly, if direct supervision is required, the program will inevitably be limited to a small fraction of producers in the economy, and therefore be much less efficient.

What determines whether a program requires direct supervision? Consider the JOBS program, which involves direct supervision of participating firms by Federal project officers. Individual contracts are negotiated with each firm that participates. If the employer convinces the project officer that training costs will be high, the contract provides for larger subsidies. Training costs are difficult to measure. It would be difficult, in an ex post investigation, to determine whether the firm had in fact incurred the training costs it claimed. Training costs depend on how much time supervisors spend, how much equipment is released from maximum productivity so that the new employee may use it, and so on. While it is not clear that the project officer is able to measure these costs very well in advance, he can at least prod the employer into specifying how the training will occur, and derive an estimate in this way. When the employer specifies the training cost, he know it will be reviewed by the project officer before the contract is approved.

A program that tries to finance costs that are difficult to measure and verify cannot be administered like the tax system. In contrast to JOBS, consider the WIN tax credit. Here, no attempt is made to finance the specific training costs involved in employing WIN persons. The method is simply to pay 20% of the wage as a tax credit. The only information required is the wage actually paid to the person. This is easily measured, and there is no ambiguity. While payroll records can of course be falsified, experience with the tax system indicates this can be held to an acceptable level. The reason is the lack of ambiguity, which increases the chance of being found in clear violation, should an investigation be conducted. If the program subsidizes training costs, any employer who claims 10% more cost than he actually incurred would be able to offer a good case to an ex post investigator. It would be difficult for the investigator to discover how much time the supervisor actually spent with the trainee, how much this time was worth, and so on. The basic principle is that ambiguity makes indirect administration unworkable.

Once direct supervision is required, the number of program agents that can participate falls drastically, due to the limitation on the number of Federal project officers. Even if a large number of private firms had wanted to participate in the JOBS program, the government simply would not have been able to handle it. The exclusion of most firms in the economy would result in a serious efficiency loss.

The second consequence of direct supervision is that it raises the participation cost to the program agent. Even under indirect supervision, as under the tax system, a positive participation cost is incurred which reduces the effective subsidy rate below its nominal level. Participation in the WIN tax credit requires some additional bookkeeping, and some effort from management, personnel, and supervisors. If the chance of being investigated by the government is increased because of participation, this is also a cost. Thus indirect administration still entails a positive participation cost for program agents.

In the case of direct supervision, however, the participation cost may become prohibitive. Negotiating contracts with Federal project officers, inspection by these officers both prior to the contract and during the program, are costs likely to be significant to most businesses. It is well known that many businesses preferred to forego the JOBS subsidy and hire disadvantaged persons without compensation, rather than submit to the administrative process.[1] Thus, to induce the same response, the subsidy under a directly supervised program will have to be considerably larger than the subsidy under an indirectly administered program.

While there has been discussion of whether direct subsidies are better than tax credits, this issue is minor compared with the distinction between direct and indirect supervision. Whether the employer files his claim with the Manpower Administration or the Internal Revenue Service does not make much difference. There are sound reasons for preferring direct subsidies to tax credits for all government expenditure programs.[2] It is more essential to recognize, however, that either a direct subsidy or tax credit that requires direct supervision will be far less efficient than a direct subsidy or tax credit that does not.

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1. Levitan, Mangum, and Taggart [21], Chapter 2.

2. Cited in Surrey [36], p. 76-78.

Chapter 6

PAYING FOR WORK, NOT ON-THE-JOB TRAINING

The Federal employment program can either subsidize hours worked, or training costs incurred. Both the JOBS program, and a proposal for tax credits for training, choose the latter. In the last section, the administrative cost of paying for training, rather than work, was highlighted. Here, additional arguments against paying for on-the-job training costs will be given.

Subsidizing on-the-job training, rather than work, often rests on the idea that the only purpose of the subsidy is to offset the lower skills of additional employees. While this is indeed one purpose, it is often not understood that subsidy would still be necessary to induce additional employment if additional employees had the same skills as those already working. Subsidy would still be needed to counter diminishing returns.

This failure to recognize diminishing returns leads to the policy that subsidy should be terminated once training has been completed. Earlier discussion of the time limit problem, however, showed that this will result in lay offs unless termination happens to be synchronized with the opening up of vacancies through natural turnover or growth. Thus if subsidy is to be for training, the time limit should be set, not by how long it takes to upgrade skills, but by how long it takes before vacancies can be expected to open up.

Beyond the time limit problem, subsidizing training, rather than work, is inefficient. Lester Thurow has underlined this point as follows:

> Current training programs make a basic mistake. It is a mistake made in many government expenditure programs and regulatory efforts. They focus on inputs (training programs) rather than the desired output (higher earned incomes). As a result, they provide

> very little incentive to economize in training costs, to provide good training, and to accomplish the ultimate objective of raising incomes. Business is given incentives to training, not incentives to find the best method for raising incomes. Training programs may not be the best method to raise incomes.[1]

It is more efficient to have the Federal government subsidize the wage, and let those firms that can afford to employ additional workers do so. These will be program agents where the net productivity of the new hires (gross productivity minus training costs) is relatively high. In general, funds will go to program agents who can productively employ persons with less training. Subsidizing on-the-job training costs directs funds towards program agents that find it costly to train persons; workers are hired in jobs where their net productivity is relatively low.

The motive behind a training subsidy is understandable. It is assumed that only if the employee receives decent training will he be less vulnerable in the future. While this is correct, the cost of training does not necessarily reflect the quality of training, or more precisely, the skill and experience the person acquires on-the-job, which determines his future position in the labor market. Effective direct supervision may succeed in improving the quality of training, and separating cost inflation from costs that are necessary for good training. Such effective scrutiny, and supervision, is in itself expensive, and also means that the program must inevitably be a small one.

Under the alternative of subsidizing the wage, regardless of training cost, the person learns whatever is necessary to do his job productively, so that he is profitable to his employer. He acquires experience on the job. To employ a person profitably, the employer must make sure he learns the skills necessary for the job. Thus, the wage subsidy without supervision may not

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1. Thurow [39].

sacrifice much with respect to the development of skills and work experience. It is certain to eliminate the cost inflation from training not really necessary to the job.

The above argument does not mean that institutional training programs are inefficient. Obviously, it is more efficient for some skills to be learned in an institutional setting, rather than on-the-job. The above argument does suggest, however, that an attempt should be made to subsidize the output of institutional training programs - higher earned incomes of trainees - rather than the inputs utilized - namely, training costs. Whether this can be done in practice cannot be pursued here.

Chapter 7

A COMPARISON OF ALTERNATIVE PROGRAMS

In this section, six alternative Federal employment programs will be compared in light of the principles that have been developed.

A. THE PUBLIC EMPLOYMENT PROGRAM (PEP)

The analysis of PEP in this section relates only to its impact on the problem of low earnings. Its merit as a counter-cyclical program, for which it fairly well designed, was discussed in Part I.

PEP is seriously undermined by the maintenance of effort problem. While it succeeded in inducing a special increase in employment in its first year, it lost its ability to do so as soon as it became anticipated. In its second year, PEP's effect on employment was probably little better than an equivalent amount of general revenue sharing. It is likely that most program agents simply retained PEP employees instead of hiring additional employees with their own funds. Although PEP's maintenance of effort regulations were fairly successful in preventing direct substitution among employees, they did not even attempt to prevent the substitution of funds that occurred in the second year. Yet such substitution was probably sufficient to undermine any special stimulus to employment.

Even if maintenance of effort provisions cannot prevent substitution of funds, a special increase in employment (i.e. better than general revenue sharing) can be achieved if the cost of truly additional labor is effectively reduced. While this is guaranteed under an open-ended grant, PEP's closed-ended design prevents this from happening. In most cases, once the program is

anticipated, most of the grant is probably used to fund jobs that would have been funded by the program agent. No Federal funds are available to subsidize truly additional employees. Additional labor is no cheaper than before, and no special incentive is created.

While PEP's effect on employment is little better than general revenue sharing, it does shift somewhat the composition of employment. This is because a portion of each PEP grant can be applied only to particular subcategories of workers, rather than to the broader category of all workers. Some PEP employees must be "disadvantaged," some must be veterans, and so on, for each program agent. As long as the PEP requirement for a subcategory is greater than the program agent would have freely hired, that group will receive a greater share of the jobs under PEP than it would under general revenue sharing.

PEP has a time limit problem. Subsidy for particular persons is not supposed to last indefinitely. Rather than specify a definite cut-off period, agents are supposed to exert effort to place PEP employees in regular unsubsidized positions. It is feared that if the time limit is toughened, a significant fraction of PEP employees will be laid off at the end of their limit.

PEP used a high subsidy rate of 90%. Since all program agents requested their maximum, many could have requested more, and created more jobs, under an open-ended subsidy of 90%. This means that the same number of jobs could have been induced under an open-ended design with a lower subsidy rate. PEP's closed-ended design was costly to the Treasury.

If PEP retains its closed-ended design and weak maintenance of effort provisions, it will remain equivalent to general revenue sharing coupled with affirmative action for particular labor force groups. If it adopts the open-ended design, its maintenance of effort problem will become urgent, as substitution of funds is no longer limited by the ceiling on the grant. A new approach to maintenance of effort will therefore be required.

B. JOB OPPORTUNITIES IN THE BUSINESS SECTOR (JOBS)

JOBS is seriously undermined by the maintenance of effort problem. The program offered no effective way to prevent employers from placing JOBS employees in jobs they would have filled anyway. Like PEP, the hiring of JOBS employees may have increased employment in the short run, but before long, the program agent probably primarily retained the JOBS employees instead of filling vacancies (due to growth or turnover) from its own funds. Like PEP, JOBS' closed-ended design prevents a reduction in the cost of truly additional labor. Once the maximum number of employees have been hired, additional labor is no cheaper than before. Since the JOBS employees simply fill jobs that would have been filled anyway (before too long), little additional labor is hired.

Like PEP, JOBS does shift somewhat the composition of employment. JOBS employees must be "disadvantaged." While program agents may have hired persons who meet the requirements for disadvantaged, even without JOBS, it is likely that disadvantaged persons receive a greater share of employment than they otherwise would. Thus, JOBS operates as an affirmative action program without offering a special stimulus to employment.

JOBS has a time limit problem. Subsidy is terminated when training is completed. Yet the training period may not be long enough to allow vacancies to open up, so that former trainees can be absorbed.

JOBS pays for training costs, rather than for work. As a result, it offers no incentive to economize in training costs; the greater the training costs, up to some maximum, the more the business is paid. No incentive is created to have those businesses that train most efficiently do so. Because training costs are difficult to measure, direct supervision, requiring negotiations, and individual contracts, is necessary. This limits the program to a small fraction of the private sector, since Manpower Administration project officers are limited. It raises the participation cost to businesses, discouraging many altogether, and requiring large gross subsidies for those that do participate.

As a private sector program, leakage of funds due to the maintenance of effort problem has distributive implications. Most businesses in JOBS receive grants that are really unconditional, except that disadvantaged persons must receive a greater share of the same number of jobs that otherwise would have been created. It is likely that Federal funds in large part benefit the owners and managers of the businesses, as argued in the analysis of the profit vs. the non-profit sector.

In sum, JOBS, like PEP, has some positive impact as an affirmative action program. The disadvantaged receive a larger share of roughly the same number of jobs that would be induced by an equal amount of an unconditional grant. No special stimulus to employment is provided, however, and JOBS has other important structural weaknesses.

C. THE WIN TAX CREDIT

Under the WIN tax credit, authorized by the Revenue Act of 1971, employers receive a tax credit equal to 20% of the wage on each graduate of the Work Incentive Program (the training program for welfare recipients) they hire.

The WIN tax credit offers no effective method for securing maintenance of effort. Employers are required to declare that they are not substituting the WIN employee for others, directly or indirectly, but such a provision cannot be effective against indirect substitution, which alone is sufficient to undermine maintenance of effort.

Unlike PEP and JOBS, however, the WIN tax credit is open-ended in design, despite a high nominal ceiling. Most employers are free to hire as many WIN persons as they wish. As a result, the cost of additional labor is effectively reduced, and despite the leakage, a special stimulus to employment is achieved. Unfortunately, the open-ended design also makes the maintenance of effort problem and the problem of substitution and lay off bias among employees, more urgent.

With the closed-ended ceiling removed, the only check to considerable substitution is the unattractiveness of welfare recipients as employees. The tax credit of 20% may be too low to induce most businesses to substitute welfare recipients for regular employees. If businesses are not willing to substitute, however, they will not be willing to hire many additional welfare employees either. Thus, if the subsidy rate is high enough to do much good, it will be high enough to induce considerable substitution.

The WIN tax credit provides subsidy for only a special subcategory of persons - new hires who are welfare recipients - and tries to protect all employees by applying maintenance of effort provisions to all employees. While these regulations do not work, anyway, even effective maintenance of effort regulations will be unable to prevent serious inequities, as long as subsidy is restricted to a special subcategory.

The justification for this subcategory - welfare recipients - can be understood, yet remains questionable. Obviously, the purpose is to reduce the welfare rolls, and assist recipients. It may be asked, however, why the person on welfare should have an advantage over a person working full-time at a low wage who wants to improve his job? Is it fair for non-welfare persons to be told by employers that the welfare recipient is more attractive because of his subsidy? If the tax credit is regarded as small by employers, substitution will not be serious, but the credit will have little impact. If the credit succeeds in making recipients attractive to many employers, then serious inequities will result.

WIN has a time limit problem. Tax credit for particular employees must be terminated at the end of two years (credit is only paid for one year, but the employer must retain the employee an additional year). At the end of that period, if regular vacancies do not occur, the individual will be laid off.

As a private sector program, like JOBS, the inevitable leakage means owners and managers will receive a windfall from the program. No attempt has been made to tax back this windfall by tying the WIN tax credit to a tax capable of doing this.

D. TAX CREDITS FOR TRAINING THE UNEMPLOYED

This proposal is described by Kenneth Biederman in a paper written for the Joint Economic Committee.[1] Essentially this proposal has also been introduced in Congress.[2]

This proposal has the problems of the WIN tax credit, plus the inefficiency of paying for training, instead of only work (the proposal calls for financing both). No method for maintaining effort is suggested. Since only a special subcategory is subsidized - new hires who are disadvantaged, or unemployed - substitution among employees is a serious problem. If a closed-ended design is chosen, substitution is limited, but so is the ability of the program to induce an increase in employment. Under a closed-ended design, like JOBS and PEP, its contribution would be as an affirmative action program. Under an open-ended design, additional employment would be induced, but the maintenance of effort and substitution problems would get out of control.

E. AN UPGRADE PROGRAM

This proposal is a modification of one outlined by Lester Thurow.[3] Employers would be subsidized for raising the wage of previously low wage persons. The base year wage of the worker must be below some level. The employer would receive payment for each hour actually worked. Subsidy could either equal a fixed percentage of the wage paid; or a fixed percentage, plus a percentage of the difference between the wage and base wage. A minimum upgrade in the wage might be required for the employer to earn subsidy. The

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1. Biederman [2].

2. Cited in Biederman [2].

3. Thurow [38], Appendix I. While Thurow's plan differs in certain respects from the upgrade program summarized here, it is identical in its weaknesses.

subsidy for a given employee would be limited to some specified number of years.

The upgrade program has several advantages. Higher earned income, not training costs, are paid for. The program can be administered like the tax system, and thus all producers in the economy can be included. It is open-ended in its design, and should therefore induce a genuine increase in employment, in high wage program agents. Treating all low wage persons alike should be an improvement over the WIN tax credit, where welfare recipients have an advantage over other low wage persons.

Unfortunately, the upgrade program is undermined by maintenance of effort, substitution and lay off bias among employees, and the time limit problem. No attempt is made to maintain effort. Yet many persons are ordinarily upgraded. Leakage would be significant.

More serious, however, are the problems that stem from attaching subsidy to particular persons. Substitution among employees, and lay off bias, are inevitable. When subsidy is terminated for a person, he may be laid off, if a regular slot does not open up at that time. While a maintenance of effort index could be added, there is no way to eliminate these problems in an upgrade program, in which subsidy must be attached to particular persons - namely, those with a lower wage in the previous year.

F. AN EMPLOYMENT INCENTIVE PROGRAM (EIP)

This proposal is offered, <u>with reservations</u>, in light of the principles developed in this evaluation, and the problems that pervade the alternatives thus far considered. The Employment Incentive Program does not pretend to eliminate all of these difficulties. EIP is designed, however, with the goal of reducing the severity of these problems. EIP will stand or fall on the ability to devise a tolerably fair, workable maintenance of effort index. EIP cannot be proposed without reservations until further research is done on the possibilities of devising such an index. EIP

can be restricted to the public or non-profit sector; or it can be applied to all producers, public and private. This choice will be considered after the distinguishing features of EIP have been set out.

EIP will use a maintenance of effort index, rather than the standard regulations now used by all programs. The maintenance of effort norm for each program agent will be set by formula. The initial quota for a program agent will equal its number of nonsupervisory employees in the period just prior to the introduction of the program. The quota or norm - the number of nonsupervisory employees it must finance itself - will then vary with the change in the agent's non-labor cost, or perhaps other variables that more effectively predict the changes that would have occurred in nonsupervisory employment had there been no program. For example, if non-labor cost increases 6% over the initial level, and the average nonsupervisory wage in the subregion increased 4%, then the quota might be raised 2%. The formula could of course be more complex, if this would improve the accuracy of the index in predicting how nonsupervisory employment would have changed.

The subsidy earned will depend solely on the number of nonsupervisory employees on board relative to the norm. No distinctions will be made among employees; subsidy will be earned on the surplus of employees beyond the norm. The greater this surplus, the greater the subsidy. The program agent will not be subsidized for adding new hires; or new hires with special characteristics, such as head of household, disadvantaged, or welfare recipient. The agent will be subsidized for having a surplus of nonsupervisory employees relative to its norm. Since all nonsupervisory employees contribute to the surplus, there is no incentive to substitute one set of persons for another, or to lay off particular employees.

EIP will be open-ended. Program agents will be free to earn as much subsidy as they can, by employing as great a surplus of non-supervisory employees as they wish. The greater the surplus, the greater the subsidy earned, without limit. It must

be emphasized, that the total cost of EIP can be set at whatever level Congress desires, in spite of the open-ended design. The subsidy rate can be set low enough to achieve any total cost desired (in the limit, obviously, a zero subsidy will result in a zero program cost). As with tax rates, the EIP subsidy rate will have to be set so that the expected cost is at the target level.

An example will illustrate the program. While the change in non-labor cost is used in this example, this is only for the purpose of illustration. Other variables may turn out to be a better index. Suppose in the year prior to the introduction of EIP, a program agent incurred a non-labor cost of $30 million, and a non-supervisory labor cost of $7.5 million. At the average annual salary of $7,500, this corresponded to 1,000 full-time equivalent employees, (the full-time equivalent measure combines part-time employees into full-time equivalents according to the hours they work), on the average. The average might be computed by taking the number on board on the first of each month, and averaging these twelve numbers. This means that a monthly non-labor cost of $2.5 million corresponded to $.625 million of labor cost, or 1,000 employees. These are its base period values.

Suppose that in the first month of the program, the non-labor cost was $2.7 million, 8% above its base of $2.5 million. It might be assumed that the labor cost would also be 8% larger (of course, alternative assumptions might be better). Suppose the average wage in the region for that month was 5% higher than during the base year. Then it might be assumed that its average number of non-supervisory employees would be 3% higher, or 1,030 full-time equivalent employees. If the program agent averaged 1,060 employees for the month, it would be subsidized on its surplus of 30 employees. Subsidy would be computed as follows. 30 full-time equivalent employees would work about 160 non-overtime hours each month. If the subsidy were $1.00 an hour for each non-overtime hour of surplus employees, the subsidy would be $160 per employee for the month, or $4,800 for the 30 employees. If the surplus had been 31 employees, an additional $160 would have been earned. Thus, the program agent could calculate that for each

additional full-time nonsupervisory employee, the cost to the agent would be $160 less than the monthly salary. At an average monthly salary of $625, this would reduce the cost to the employer 25% on the average, for each additional nonsupervisory employee.

This formula is used only for illustration. It might be that labor cost would not be expected to change by the same percentage as non-labor cost, but by a different percent. The addition of other variables might improve the index. Careful empirical study of the current relationship between these variables and nonsupervisory employment is needed in order to choose the best index possible.

Each program agent would file its request for subsidy once a year with the Manpower Administration. It would submit its base year figures, and its operating cost and employment for each month. It would claim the amount of subsidy to which it was entitled according to the formula. The Manpower Administration would pay the subsidy, after checking the computation. A sample of program agents would be investigated, as under the tax system. Thus, EIP will not involve direct supervision.

EIP would only apply to program agents covered by, or meeting the standards of the Federal minimum wage law. If the program agent paid any employee a wage less than the Federal minimum wage, it would not be eligible for subsidy. This is the simplest way to insure that EIP subsidizes only above minimum wage employment. All program agents covered by the minimum wage would qualify. Program agents not covered by the minimum would have the option of either voluntarily paying all employees at least the Federal minimum wage, in order to qualify, or foregoing participation in EIP. Any program agent filing for subsidy would have to declare that it paid all employees at least the Federal minimum wage.

On filing for subsidy, each program agent would also have to declare that it was in compliance with the Civil Rights Act, and the standards of the Equal Employment Opportunity Commission. It might be required to submit the race and sex percentages of its employees, and a brief statement of why these percentages are con-

sistent with the above standards. If all program agents were investigated, not only would the administrative cost be huge, but even non-discriminating agents might be discouraged from participating. Thus, only a small sample should be investigated, and subsidy should otherwise not be denied. Penalties for violation, however, should be severe.

EIP subsidy per hour should differ for each sub-region. Sub-regions should be large enough to insure enough program agents in the area to prevent collusion. The sub-regional subsidy rate must be set by a formula, so that politics does not influence discretionary decisions. One formula might be as follows. The aim would be to set a rate so that each sub-region achieves the same ratio of the number of subsidized employees to the number of unemployed in the sub-region. This ratio can be computed for each sub-region, and the whole nation, in the previous year. Then for each sub-region with a below average ratio, the subsidy rate can be raised, and conversely for each sub-region with an above average ratio. Political factors in Congress will undoubtedly shape the formula used.

EIP has no time limit problem. Since subsidy is not attached to particular employees, but depends only on the total number of employees and the norm, there is nothing to limit.

The maintenance of effort index must overcome difficulties. In the earlier discussion of an alternative approach to maintenance of effort, these difficulties were examined, and a method to reduce, though not eliminate, these problems was outlined. The aim should be to group program agents more homogeneously, along dimensions such as geographical area, industrial classification, and size. The grouping can be explicit, or implicit through the introduction of additional variables into the equation that determines the index. It should be possible to reduce leakage, and inequities, in this way. Refinement should be continued until the cost in administrative complexity outweighs the benefit.

When compared to an ideal - subsidizing only employees beyond the number that each agent would have hired anyway - the method proposed here for EIP leaves much to be desired. When compared to

the alternatives available, however, it could represent a significant improvement. The key issue is whether the index can work well enough to contain leakage, though certainly not eliminate it, and to treat program agents reasonably fairly, even under an open-ended design.

EIP can be restricted to the public sector, to the non-profit sector, or applied to all producers, public and private. If EIP is restricted to the public sector, there is no problem of setting base year values for new agents. If non-profit or profit firms are included, then new agents will pose a problem. This can be handled by requiring an agent to operate for several years before it becomes eligible for EIP. Its average relation between operating costs and nonsupervisory employment over this period will be used to set its base period values once it becomes eligible. The period must be long enough for the agent to have no incentive to use less employees relative to non-labor cost than it otherwise would in order to secure a favorable base. In order to be fair to new firms, and not discourage new entry, ineligibility for EIP should be compensated for by a reduction in the corporation income tax, by an amount likely to be comparable to the sussidy it would have earned had it been eligible for EIP.

If the effect on the distribution of income can be offset, it would be clearly better to apply EIP to the profit sector. The economic efficiency and Treasury efficiency of EIP will be much greater if the profit sector is included. A tax capable of taxing back much of the expected leakage in the profit sector must be tied to EIP. If the distributional effect cannot be offset, a hard choice must be made.

Some arithmetic can help clarify the choice. Earlier, it was estimated that if subsidy were confined to additional employees, and no leakage occurred, a program applying to all producers would cost about $4 billion to induce 2 million additional jobs. Each program agent would on the average increase employment about 4%. Thus, an agent that would have employed 100, would employ 104. For leakage to double the cost of the program, the norm would have to be set at 96, instead of 100. Whether this is a reasonable

estimate of leakage depends on the stability of the relation between non-labor cost, or other variables, and employment. Careful empirical analysis is necessary to estimate leakage. Assume leakage doubles the cost to $8 billion.

When a base of 45 million nonsupervisory employees is used - the number in the entire economy - it is assumed that an annual subsidy of $2,000 per surplus employee will induce an increase of 2 million. If EIP is restricted to the public sector, the base is only about 8 or 9 million. The addition of private non-profit firms will raise the base somewhat. There is no reliable way to predict the subsidy needed to induce the non-profit sector alone to absorb 2 million. It is likely that the subsidy per employee will have to be two or three times as large. This would raise the cost of the program to $16 or $24 billion. Put another way, $8 billion would only achieve an increase of perhaps 750,000 to 1 million jobs. Clearly, the loss in Treasury efficiency is likely to be very large.

The moderate income person pays the same tax whether the $8 billion is spent in the non-profit sector, or both sectors. If the leakage occurs in the public sector, he will benefit from the public services produced, or local tax reduction. If the leakage occurs in the profit-sector, he will not gain from it; the gain will go primarily to owners and managers. The number of persons receiving adequate wage jobs will be double or triple if all producers are included. The choice is ultimately a matter of values.

G. THE INTEGRATION OF EIP WITH ARP

EIP is easily integrated with the Anti-Recession Program described in Part I. Since each offers subsidy for a distinct goal, an employer may be entitled to neither, just one, or both. Consider a public employer, to whom both programs apply. Under ARP, he will receive a closed-ended grant, earmarked for employing persons, whenever the national unemployment rate has risen above the trigger level. Under EIP, he will receive subsidy if

he increases his use of nonsupervisory employees relative to other inputs.

ARP and EIP are complementary, not redundant, and they seek distinct objectives. On the one hand, an employer may receive EIP subsidy whatever the national unemployment rate, solely on the basis of shifting factor proportions in favor of nonsupervisory labor. On the other hand, an employer who receives ARP funds may or may not earn EIP subsidy. If an employer earns subsidy from both programs, it means the national unemployment rate is above the trigger level, and the employer is shifting factor proportions in the desired direction.

In computing the surplus of nonsupervisory employees above the norm for EIP, should ARP employees be counted? The answer is that it would be wasteful to do so. Since ARP will allow at most 20% of its funds for non-labor expenses, and since in the short run recipient program agents will have difficulty adding complementary inputs (given the annual budget cycle), ARP is likely to shift factor proportions in a direction that would earn EIP subsidy. Thus, a possible practical solution would be to assume that non-labor expenses would be 20% of the labor expenses, and subtract these from the program agents' accounts before computing the EIP subsidy. This subtraction would enable the factor proportions of the public employer, prior to ARP, to be estimated.

H. SHOULD EIP BE RESTRICTED TO THE DISADVANTAGED?

One of the important features of EIP is that it subsidizes a surplus of nonsupervisory employees, above the norm, without regard to the characteristics of the employees. As a result, there is no incentive to substitute new hires for current employees; or one set of persons for another. No set of employees can be labeled the subsidized ones. There is no need to certify persons as eligible for subsidy. Thus, administration is considerably simplified.

If subsidy is restricted to disadvantaged persons, there will

be no way to protect non-disadvantaged persons against subsitution, or lay off bias. Since many of these will be persons whose families depend on them for support, serious inequities are inevitable. Even if the subsidy is limited to disadvantaged heads of households, most will still believe it is unfair for one household head to be preferred to another, simply because of subsidy.

It is impossible to set the subsidy so that it just compensates for the bias employers have against disadvantaged persons, or their lower productivity. Both bias and productivity will vary among employers. A subsidy large enough to offset either of these in one employer will make the disadvantaged person more attractive to another employer. Any subsidy large enough to have impact is bound to make the disadvantaged more attractive than other low-skilled persons for many employers.

Because of the consequences, the definition of disadvantaged is bound to be difficult. Wherever the line is drawn, persons with low skills who must support families will be left out, and therefore, vulnerable. Under a small, closed-ended program, opposition to the program might be contained. Since the program must be large and open-ended to have impact, reaction against the program, once its consequences for the non-disadvantaged are grasped, should be severe. Opposition should be worse than in the case of racial quotas.

EIP requires evidence of compliance with the Civil Rights Act, and the EEOC standards. This is the most that can be done without introducing discrimination in reverse, because of subsidy. It should be realized that the disadvantaged will gain from EIP even if it applies to all employees, for the additional above-minimum wage jobs must go to those who now do not have them.

I. SHOULD EIP BE RESTRICTED TO HEADS OF HOUSEHOLDS?

Perhaps the most appealing special subcategory is heads of households. One economist who favors targeting subsidy on heads of households puts the issue as follows:

> Assume that there is only one additional job available and two involuntarily unemployed persons. Let one of these be a father of five and let the other be a teenage member of a high income family who is living at home (or any other secondary worker). Assume further that the teenager is slightly more productive. From society's point of view it would be better if the father gets the last remaining job; yet the employer seeking to maximize profits will make the offer to the teenager. The proposed policies are intended to create a situation in which primary family members are guaranteed those jobs that provide adequate wages.[4]

Whether heads of households should have an advantage in the labor market ultimately requires a value judgment. It will be instructive to set out the inevitable difficulties that arise if an attempt is made to restrict EIP to heads of households. What follows is a review of the earlier discussion of substitution and lay off bias among employees, as illustrated by the case of heads of households.

Suppose subsidy is given for each head of household beyond the maintenance of effort norm. For example, if the program agent is expected to employ 100 nonsupervisory employees anyway, then 100 employees are ineligible for subsidy, and only heads beyond this number can be subsidized. Thus, if 105 employees are on board, five will be subsidized, provided either of two conditions is satisfied. Either the heads must also be new hires; or they must simply be heads, regardless of when they were hired. These are the only two possibilities, and they will be considered in turn.

If the heads must also be new hires, then heads who are not new hires will be vulnerable to substitution and lay off bias. Whenever the maintenance of effort norm must be reduced - for example, because non-labor cost has declined or risen slowly - an excess of unsubsidized employees is created. If employment is

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4. Packer [32].

maintained, the employer will have an incentive to replace these employees with heads who are new hires. If employment must be reduced, the employer will retain new hires who are subsidized, and lay off unsubsidized employees. Even if we are willing to favor heads over non-heads, there is no justification for favoring heads who are new hires over heads who are not.

The other alternative is that the five employees must simply be heads, regardless of when they were hired. While this eliminates the distinction among heads, it also undermines the attempt to limit subsidy to heads. The result of this condition is to subsidize all persons beyond the maintenance of effort norm. To see this, assume that the program agent initially has 100 nonsupervisory employees, of whom 50 are heads of households. Suppose five non-heads are added, bringing the total to 105. Since the maintenance of effort norm is 100, 55 non-heads, and 45 heads can be selected to fill this quota, and 5 heads can be chosen for subsidy. As long as there are heads helping to fill the quota, the addition of non-heads will free these heads for subsidy. The attempt to limit subsidy to heads will fail.

Subsidy can be effectively limited to heads only if a maintenance of effort norm that applies only to heads is introduced. Under this approach, the program agent would be subsidized for having a surplus of heads of households above a norm that applies only to heads, provided the regular maintenance of effort norm is also satisfied. The head-maintenance of effort norm cannot replace the norm that applies to all nonsupervisory employees, but must supplement it. If the regular norm were eliminated, then heads would be substituted for non-heads without limit, involving substantial outright lay-offs.

Unlike nonsupervisory employment, head of household employment cannot bear a stable relation to a variable like non-labor costs. Heads are close substitutes for non-heads with similar skill. The norm will inevitably be arbitrary. Suppose average head of household employment in the year prior to the program is used as a base. When non-labor costs change relative to the base year, there is simply no way to estimate what would have happened to head employment. An arbitrary rule will have to be invoked. One rule might be: whenever the maintenance of effort norm for all

nonsupervisory employees increases, raise the head norm by the same amount; but whenever the regular norm decreases, hold the head norm constant. It might be reasonable to expect that with the advent of the program, employers would add heads, but lay off non-heads, whenever their employment changed. Obviously, other rules are possible.

Earlier, in the discussion of substitution among employees, it was shown that even with a maintenance of effort quota for non-heads, substitution and lay off bias were inevitable, since the quota would frequently have to be reduced, in response to secular, cyclical, or seasonal contractions. Applying the maintenance of effort norm to all employees limits this, but it cannot eliminate it. Non-heads will find themselves replaced by heads, or laid off instead of heads, regardless of seniority or productivity (unless they are productive enough to offset the subsidy, which is unlikely). This may be considered desirable, acceptable, or intolerable, but it should be clearly understood that it is inevitable.

Employers will have to keep track of how many heads they are employing. Employees and job applicants will have an incentive to claim they are heads. Employers will have an incentive to overstate the number of heads, in order to earn more subsidy. An employer who is investigated can always claim that the employee misled him; if the employee is still on board, he will undoubtedly deny this. One approach would be to require employers to collect affidavits from employees declaring they are heads of households. The employer might be required to file these with his request for subsidy, or simply have them available, should he be investigated. Some fraction of non-heads would probably give false affidavits, but employers would be required to warn the applicant that this was a Federal crime.

Because of the consequences, the decision of who to count as a head of household will be a difficult one. The program might apply only to households with at least one dependent child; also include husband-wife households without children; or also include single individuals supporting themselves. In a household with more than two members, who is the head can be left for the members to decide, or guidelines can be imposed. It is likely that in either case, the

great majority of heads will be men. Since heads will tend to be substituted for non-heads, women may well be adversely affected. It is even possible that a head of household program, though neutral on its face, might be held to illegally discriminate against women. At any rate, this aspect must be weighed.

Restricting EIP to heads of households would of course improve its anti-poverty efficiency. The question is whether we are prepared to favor heads over non-heads, even when this means that non-heads will be directly replaced by heads, or laid off instead of heads, or paid less than heads for the same work, simply because of subsidy. The program will also become administratively more complex, and the maintenance of effort norms more arbitrary. Favoring heads will worsen job opportunities for women (who will usually not be heads) and teenagers. The concept of equal pay for equal work, regardless of who does it, will be amended.

It is my judgment that restriction of EIP to heads of households, all things considered, is not worthwhile. I am not ready to accept the view that heads should always be favored over non-heads in the labor market, given the full range of consequences of such a policy. The additional administrative problems also impress me as serious. The decision to apply EIP to all nonsupervisory employees is compatible, however, with an attempt to guarantee a job for all heads of households. Such a guarantee could be implemented by using a high subsidy rate for EIP, and supplementing it with special Federal work projects in which heads would be favored. While a guarantee would be made easier if EIP were restricted to heads, it can also be implemented without such a restriction.

An Employment Incentive Program that applies to all nonsupervisory employees seems to me to be better than a restricted one. While EIP does not eliminate all problems, it should be an improvement over all available, feasible alternatives, provided a workable maintenance of effort index can be developed.

PART III

THE DESIGN OF A GUARANTEED JOB OPPORTUNITY AS A PART OF WELFARE REFORM

Chapter 1

A GUARANTEED JOB OPPORTUNITY AND WELFARE REFORM

A Gallup poll taken several years ago showed that while only a minority of Americans favored a guaranteed income, four-fifths supported the concept of a guaranteed job opportunity. The reason is not surprising. Most people feel it is unfair for an able-bodied person to receive income without work, when other individuals work hard to earn the same income. At the same time, most sympathize with the person who is willing to work, but cannot find a job.

While a guaranteed job opportunity is appealing in its own right, it is also a necessary part of any fair reform of the welfare system. Most would support an adequate level of welfare benefits to those who are truly unable to work, or whom society does not expect to work. Under the current system, however, benefits are also paid to persons capable of work. This is because there is currently no effective way to distinguish between persons unwilling to work, and persons willing to work, but unable to find a job. It is well documented that the requirement that all able-bodied welfare recipients register for work is ineffective.[1] The majority of those who register are never put to the test, because no job is made available.

Only a guaranteed job opportunity can effectively separate those who want to work, from those who do not. If all able-bodied household heads without young children in their care are made eligible for the guarantee, but ineligible for welfare,

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1. Levitan, Rein, and Marwick [22], Chapter 4, p. 93.

there are several consequences. Persons who want to work will be able to do so. Persons able but unwilling to work will receive little or no aid. The public will be certain that welfare is restricted to persons unable to work. This assurance may generate an increase in welfare benefits.

Female heads of households with young children in their care are usually, though not always, exempt from a work requirement.[2] The issue of eligibility for welfare, or a guarantee, is a topic in its own right, and will not be discussed here. This analysis will assume that a decision has been made concerning who is expected to work, and who is not. The guarantee as a substitute for welfare will apply only to the former.

To contribute to welfare reform, a guaranteed job program need not provide a permanent, regular job at an above poverty wage. Even a transitional job at a wage above current welfare and unemployment compensation levels would represent an improvement. Under this modest goal, the aim would be to keep the person employed as productively as possible, earning some income, until a regular job can be found. It would be better still if the guaranteed job program were able to provide permanent employment at an above poverty wage. Whether this can be done will be considered.

While the desirability of a guaranteed job opportunity is widely accepted, its feasibility is an open question. The <u>feasibility</u> of the guarantee is the subject of this analysis. First, the inflation constraint will be considered. Second, the efficiency of alternative strategies for implementing the guarantee will be analyzed, and one strategy will be proposed, with reservations. Finally, this proposal will be compared with current experiments and alternative proposals.

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2. U.S. Senate, Committee on Finance [54], p. 67.

The relation of the guarantee to welfare reform makes it likely that it will receive considerable attention in the next few years. Welfare reform has transformed the guarantee from a distant goal into a component of short term reform. Without the guarantee, one of the central inequities of the welfare system will remain.

Chapter 2

THE INFLATION CONSTRAINT

A. THE FACTOR PROPORTIONS PROBLEM

Why not simply expand aggregate demand through the standard tools of fiscal and monetary policy until anyone seeking a job can find one? The answer, unfortunately, is that inflationary pressures become unacceptable before enough jobs are created to satisfy everyone seeking work. It is not enough to know that inflation prevents the use of ordinary fiscal and monetary policy to achieve the guarantee. It is also essential to understand why the inflation occurs while unemployment is still above the necessary frictional level.

Some understanding of the relation between inflation and unemployment is essential for two reasons. First, some of the proposals for a guarantee that have been advocated are likely to be just as inflationary as fiscal and monetary policy - the only difference being that the proposals are more bureaucratically cumbersome and less efficient than standard policy. These proposals recognize that standard policy cannot be used because of the inflation constraint; but by ignoring the source of such inflation, they turn out to have the same deficiency. Second, only by understanding this relationship can we design a proposal that enables the guarantee to be achieved with acceptable inflation.

No pretense will be made that what follows is an analysis of the cause of the unemployment-inflation relationship. Instead, the discussion will focus on one source of the relationship - a source that is especially relevent to the problem at hand. Clearly, a comprehensive analysis of this relationship is beyond the scope of this paper.

One reason for the emergence of unacceptable inflation while

unemployment is above the necessary frictional level may be called the factor proportions problem. The factor proportions problem may be contrasted with what may be called the Keynesian problem. Under the Keynesian situation, there is unemployment because aggregate demand is inadequate, and all important primary factors of production are unemployed or underutilized. This is the situation in recession. What characterizes this situation is the absence of shortages. All important factors are in ready supply, available at current prices. The cure for Keynesian unemployment, as Keynes of course prescribed, is the expansion of aggregate demand through fiscal and monetary policy. Since all factors are in excess supply at current prices, producers can meet an expanded demand for output at current prices. There is no reason why significant inflation should be caused by the reduction in unemployment that results.

In contrast, the factor proportions problem occurs when one factor of production, low-skilled labor, remains partly unemployed, while other factors of production - various kinds of skilled labor, capacity, and materials - are not in excess supply at current prices. To call forth a greater supply of these inputs will require an increase in their price, and perhaps a significant time lag. This situation is characterized by the simultaneous existence of unemployment in one factor, and shortages in other factors. The factor proportions problem arises when factors are not utilized in the proportions in which they would be supplied at current prices.

The factor proportions problem is ameliorated by a flexible price system. Excess demand tends to be eliminated by an increase in the factor price. Conversely, excess supply - the unemployment or underutilization of a factor - tends to be reduced by a fall in its price. In the case of low-skilled labor, however, there are important institutional barriers that prevent the wage from falling enough to induce the employment of everyone willing to work at the going wage. While the wage of low-skilled labor is often too low to provide an above poverty income, it is too high to induce employers to be willing to hire all who seek work.

In developing economies, the factor proportions problem is well recognized.[3] In these economies, low-skilled labor is much more abundant relative to other factors (i.e. skilled labor, capital, and productive land). Thus, even when the wage falls to the level of bare subsistence, substantial low-skilled labor remains unemployed or underemployed. Because physical and human capital are scarce, the marginal productivity of low-skilled labor falls below the subsistence level well before all low-skilled persons are fully employed. At the subsistence wage level, it is therefore unprofitable for employers to hire all who seek work.

It is less widely recognized that advanced economies also have a factor proportions problem, though it is far less serious than that experienced by developing economies. On the one hand there are strong forces at work to mitigate the problem. In advanced economies, the ratio of low-skilled labor to other factors is much smaller. Low-skilled labor can cooperate with relatively abundant skilled labor and capital to yield a much higher marginal product for itself. Furthermore, most "low-skilled" labor is actually somewhat skilled, due to the relative abundance of at least some human capital - basic education, usually scarce in developing economies.

On the other hand, in advanced economies the level to which the wage can fall is also much higher. Since average productivity, and therefore, average incomes are so much higher, the minimum standard of living considered acceptable is also much higher. As a result, the society may enact a minimum wage law, to ensure this standard for everyone who works. The government may provide welfare payments at this level for many who do not work. Since low-skilled persons may be able to choose welfare if the wage falls below this level, a floor is created. Poverty

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3. Eckhaus [7].

is defined relative to average income. It becomes humiliating to work at a job that does not pay at least this socially acceptable minimum. Even if the minimum wage is not universal, those jobs that pay less are refused by many low-skilled workers, or accepted only on a temporary basis. Full-time search for a better job, welfare, or even illegal activity becomes preferable.[4] Thus, even if the wage is allowed to fall below the legal minimum, it fails to call forth the low-skilled individuals still unemployed.

To a large extent, the forces ameliorating the problem overwhelm the forces prolonging it. Evidently, recent economic history shows that at least 95% of the labor force, and a large majority of the low-skilled, are sufficiently productive so that they can be employed at the going wages.[5] Nevertheless, given the full employment of capital and skilled labor, the full employment of low-skilled labor would bring the marginal productivity of low-skilled labor below the minimum wage, because of diminishing returns. It would therefore not be profitable for employers to fully employ these persons.

Even if all low-skilled workers were identical, marginal productivity would decline as employment increased due to diminishing returns (i.e. the fact that an increasing amount of low-skilled labor is cooperating with a fixed amount of other factors). This diminishing marginal productivity is exacerbated by the fact that low-skilled workers are heterogeneous. Those low-skilled workers who are more attractive to employers tend to be hired first. As a result, an expansion of employment involves moving down the labor queue towards workers perceived to have increasingly lower productivity.

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4. Doeringer and Piore [6].

5. See the discussion of the inflation-unemployment trade-off in Part I, Chapter 2, Section A.

B. ALTERNATIVE RESPONSES TO THE PROBLEM

To reduce unemployment without generating unacceptable inflationary pressures, more low-skilled labor must be demanded relative to other factors, so that the demand for factors corresponds to their supply at existing wages. Any policy that ignores this will do no better than the unemployment-inflation relation generated by ordinary fiscal and monetary policy. There are three methods for shifting the factor proportions demanded. They will now be considered in turn.

The first method is the classical, free market solution. It attempts to shift the factor proportions demanded by regular private and public producers. It does so by trying to remove the barriers that prevent the wage of low skilled labor from falling. It therefore calls for the elimination of all minimum wage laws, and the weakening of unions. Not only must the wage be allowed to fall; but alternatives to work must be removed so that supply will not withdraw from the market in response to the lower wage. This approach would therefore seek the elimination of welfare for everyone capable of work, and reduction in the opportunities for illegal income through improved crime control.

The second method also attempts to shift the factor proportions demanded by regular private and public producers. Like the first method, this is to be achieved by reducing the wage for low-skilled labor faced by employers. Unlike the first method, it does not try to reduce the wage received by low-skilled workers. To lower the wage paid without lowering the wage received, this method calls for subsidizing the employment of low-skilled workers. The Employment Incentive Program (EIP), proposed in Part II, illustrates this approach.

If the second method is introduced when the level of aggregate demand already presses against the supply of other factors, clearly the new expenditure must be offset by taxation. By altering relative factor prices, this method will be able, allowing a period of adjustment by producers, to induce a greater level of

employment for a given level of aggregate demand. In other words, employment will be greater, even after the expenditure for subsidy is appropriately offset by taxation, so that aggregate demand, and therefore, inflationary pressure from this source, is held constant.

Under the third method, no attempt is made to shift factor proportions among regular private and public producers in the economy. Instead, employment is provided in special, low-skilled labor-intensive projects. These may be run by the Federal government, but they need not be. They could also be run by state or local government, or by private organizations. In effect, the low-skilled persons who are unemployed are set to work in special projects, involving a minimum of skilled labor, capital equipment, and other materials. By restricting the use of other factors, these projects do not increase the demand for factors already fully employed or utilized. Thus, these projects bring the composition of the demand for factors closer to the available supply. Like the second method, the third involves government expenditure, and therefore, must be properly offset by taxation to hold aggregate demand constant. Like the second method, even after the offset, the employment of low-skilled labor will be greater than before the policy.

In contrast to these three methods, any method that fails to alter factor proportions in the proper direction will do no better than standard policy. For example, suppose that under method three, the special projects run or fostered by the Federal government are not low-skilled labor intensive, but instead involve roughly the same factor proportions utilized by regular employers, on average, in the economy. Then little has been accomplished that could not be done, less bureaucratically and more efficiently, by expanding aggregate demand via fiscal and monetary policy. The new special projects will bid for factors in the same proportions as the average producer. If other factors are already scarce, then the new special projects will generate the same inflationary pressure as would regular producers. If not, then standard policy could have been used.

It should be recognized that if the special projects under method three are willing to hire persons less attractive to regular employers, then they are in fact shifting the factor proportions demanded. It becomes appropriate to divide low-skilled labor into at least two categories, and treat each as a separate factor. Regular employers may tend to hire those low-skilled persons with characteristics they consider more attractive, and use little of the other factor - less attractive low-skilled labor. Since excess supply will be greatest for this factor, the special projects may be able to increase employment with less inflationary pressure by focusing on this factor.

In conclusion, any approach to the guarantee must be judged by its ability to shift the factor proportions demanded in the economy in the direction of available supply. It must induce the greater utilization of low-skilled labor - and particularly, persons who are less attractive to employers - relative to other factors of production. Unless the approach entails such a shift, it will do no better - with respect to the unemployment-inflation relation - than ordinary fiscal and monetary policy.

C. GOVERNMENT EXPENDITURE AND INFLATION

It is sometimes alleged that a guaranteed job program is inevitably inflationary because it involves substantial government expenditure. It is therefore worth noting that this assertion is false. It is meaningful to regard a given Federal budget, with a specific deficit and volume of expenditure, as inflationary. It is not meaningful to regard any one component of the expenditure total as in itself inflationary. Sometimes, a specific expenditure is held to be inflationary because, if added to the current budget, without offsetting taxation, it would make the budget as a whole inflationary. Since the expenditure can be offset either by taxation, or a reduction in other expenditures, however, it remains incorrect to assert that any expenditure is in itself inflationary.

D. THE GUARANTEE AND COST-PUSH INFLATION

One concern about the guarantee is that, by removing the fear of unemployment, it will cause workers to bargain harder over wages, thus pushing up wages and prices. It may also increase the quit rate, since workers will be more willing to quit to search full-time for a better job, if they know they can fall back on the guarantee. The increased tendency to quit will force employers to yield on wages in order to retain workers, thus contributing to inflation. Several aspects of the guarantee will determine how serious are these tendencies. These will now be considered in turn.

First, it would be possible to make persons who quit their job ineligible for the guarantee for a specific period of time. The cause of separation is a determinant of eligibility for unemployment compensation. It would be possible to apply a similar criterion here. Such a criterion of course increases the administrative complexity of the program. Yet such a criterion is utilized in unemployment insurance, (although it is not clear how successfully), and the same could be used with the guarantee. If the expected increase in the quit rate, and its impact, are considered serious, this option is available.

Second, the effect on bargaining, and on the quit rate, depends on the attractiveness of the jobs that will be guaranteed, relative to other jobs in the economy. If the jobs guaranteed were more attractive than any regular jobs, then persons would leave those regular jobs for the guaranteed jobs until that was no longer the case. Thus, the guaranteed jobs must be less attractive. Workers in regular jobs will therefore be reluctant to exchange their own job for the guaranteed job.

It may be argued that even if workers in regular jobs would not want to exchange, the availability of this cushion increases their willingness to risk lay-off by bargaining a higher wage. While this tendency should exist, its magnitude is difficult to assess. Here, the absolute, rather than just the relative attributes of the guaranteed jobs may be relevant. If the jobs pay a

wage well above current unemployment conpensation or welfare benefits, then the magnitude of the effect may be greater than if they pay a wage not far above the benefits of current programs.

To summarize, the guarantee may generate some upward pressure on wages, but it is difficult to judge the strength of this effect. Ineligibility for those who quit their last job (if this can be enforced), and relatively low wages for the guaranteed jobs should reduce cost-push pressure.

Chapter 3

THE EFFICIENCY OF ALTERNATIVE STRATEGIES

Because of the inflation constraint, a choice must be made among three methods of providing employment. The first is the classical, free market approach, which attempts to remove barriers that prevent wages from falling. The second subsidizes regular producers, private or public, to increase employment, thereby lowering the wage to producers, like method one, but without lowering the wage received by workers, unlike method one. The third, unlike the first two methods, relies on special projects created by the Federal government, rather than an regular employers, to provide employment. The efficiency of these alternative methods will now be compared.

A. THE EFFICIENCY, FEASIBILITY, AND IMPACT ON THE WORKING POOR OF THE CLASSICAL METHOD

The classical method is both economically and administratively efficient, and is efficient from the perspective of the Federal treasury, provided, of course, that aggregate demand is maintained at a sufficient level through fiscal and monetary policy. It is well known that, equity considerations aside, a competitive labor market in which wages are set to equate the supply and demand for labor will result in an efficient allocation of labor. Everyone willing to work at the going wage will be able to do so. There is no government program to administer, and no burden on the Federal treasury.

In spite of its efficiency, the classical method has two central weaknesses. The first is that its feasibility is doubtful. Even if it were desirable to weaken unions, few seriously contend that the union sector can be transformed into anything resembling a free labor market. Unions are a well established

institution, with political strength and support. It may be possible to slow the advance of the Federal minimum wage, as during the 1967-1974 period when the Federal minimum wage remained at $1.60, but it is very unlikely that the minimum wage can be eliminated, even if this were considered desirable. Nevertheless, weakening the impact of the minimum wage must be considered feasible. What is not clear is whether such weakening will induce a sufficient fall in the wage to induce a large enough increase in employment. It may be that the wage would have to fall to a very low level to accomplish this. At that level, persons may withdraw from the labor market, seeking other ways of gaining income.

The second problem with the classical method is its impact on the working poor, and poverty, and therefore, its desirability. At the beginning of Part II, the anti-poverty effect of a high minimum wage was shown. Lowering the minimum wage may increase employment. But for those who are already employed at the minimum wage, it will cause a reduction in earnings. The classical method will worsen the position of the working poor, and may increase the number of households in poverty, though this is not certain.

B. THE EFFICIENCY OF PRIMARY RELIANCE ON REGULAR PRODUCERS

The fundamental difference between methods two and three is that method two relies on regular producers to provide employment, while method three relies on special projects instead. The efficiency of reliance on regular producers rather than special projects cannot be overemphasized.

Regular producers, private and public, are "regular" because they produce goods and services that people value, and are willing to pay for as consumers or taxpayers. Special projects are "special" because demand for them is ordinarily too weak to induce either private or public producers to undertake them. While this does not imply that special projects cannot be useful, it suggests that, in general, people will value the output of

regular producers above the output of special projects. There is far less danger of make-work if employment is provided by regular producers.

Administratively, relying on regular employers is bound to be simpler. Instead of having to run special projects, the Federal government concentrates on inducing regular producers to employ persons. The major task of actual production is left to these producers.

Perhaps most importantly, those who receive jobs become integrated into the regular producing units of the economy. Presumably, if they perform their jobs well, they can advance within these units. Morale is bound to be greater when the individual works for a regular employer, rather than for a special government project.

Primary reliance on regular producers requires that they be subsidized. This raises a host of issues - maintenance of effort, substitution of subsidized for unsubsidized persons, and so on - that were analyzed at length in Part II. There it was concluded that the Employment Incentive Program (EIP) was better designed to reduce, though not eliminate, the problems that arise, than the available alternatives.

It therefore follows that the Employment Incentive Program should be the primary method of implementing the guarantee, if it is undertaken. The strategy would be as follows. Set the Federal minimum wage at an above poverty level. Then raise the EIP subsidy sufficiently so that the wage faced by employers falls enough to induce them to employ most heads of households seeking work.

It should be emphasized, once again, that the feasibility of the Employment Incentive Program, or any Federal employment program with a similar objective, depends crucially on the ability to develop a workable maintenance of effort index. Whether this can be done is still an open question. It follows that any approach to a guaranteed job opportunity that relies on regular producers will also depend on the ability to devise such a maintenance of effort index. Thus, this proposal for a guaranteed

job opportunity, like the EIP proposal in Part II, must be made with reservations.

A central feature of EIP - one that contrasts with virtually all current and proposed employment programs - is that subsidy is not attached to particular individuals. Under EIP, the employer receives subsidy for employing a sufficiently large number of nonsupervisory employees, rather than for employing particular persons. The purpose of this unusual feature is to prevent substitution of subsidized for unsubsidized persons. The significance of this feature is illuminated when it is contrasted with what is perhaps the most natural approach to implementing the guarantee.

This natural approach to the guarantee would also rely on regular private and public producers. It would work as follows. The local Employment Service offices would certify persons as eligible heads of households. Effort would then be made to place eligible persons in regular jobs with private and public employers. In order to speed placement, the Employment Service would offer regular employers a subsidy for hiring certified heads of households. If the subsidy were large enough, it should be possible to place most persons relatively quickly (provided, of course, that the economy is not in recession). In contrast to EIP, subsidy would be attached to each certified person.

The problem with this straightforward approach is that it creates an incentive for employers to substitute subsidized persons for unsubsidized persons. As argued in Part II, regulations that exhort employers not to do this, in the face of such an incentive, will not succeed. There is no way to prevent employers from laying off persons "for other reasons," and replacing them with subsidized employees. Employers, moreover, would begin to route their regular hiring through the local Employment Service office. Applicants for jobs would be advised that their prospects would improve considerably if they would first report to the local Employment Service, and become eligible for subsidy.

Such substitution can be reduced if severe restrictions are placed on the kinds of jobs, and the conditions of employment,

that regular employers can offer. Suppose the jobs must be part-time, and cannot be the same type of job currently being performed by employees with that firm, or government agency. Then, clearly, the substitution process will be constrained. But, of course, so will productivity. While persons are nominally being placed with regular employers, they are not being integrated into the regular production process. In effect, they are being placed in special jobs or projects, which happen to be supervised by regular employers. It may be administratively more convenient to let regular employers supervise such work, rather than have the Federal government create special projects. Nevertheless, the main arguments for relying on regular producers are undermined by the restrictions that are necessary to constrain substitution. This dilemma will be explored further when current experiments are discussed.

The conclusion - based on the analysis of substitution and lay-off bias in Part II - is that the natural approach of attaching subsidy to certified persons is seriously flawed. Because of the substitution problem, such an approach cannot achieve the advantages associated with reliance on regular producers. The attachment of subsidy to persons, when accompanied by severe restrictions that limit substitution, but also limit productivity, may have a role to play in the context of method three - special projects. EIP, rather than attaching subsidy to individuals , must be the basis of method two.

An argument for the classical method is that it allocates labor efficiently. It should be stressed that the second method achieves the same economic efficiency (except for a minor distortion of the labor-leisure choice due to the divergence between marginal productivity and the wage received, caused by the subsidy). The effect on producers is the same; in both cases, the wage they face is reduced. Furthermore, EIP implements the subsidy with minimum interference in the affairs of regular producers. Nevertheless, the administration of EIP - particularly, the development of the maintenance of effort index - raises problems not encountered by the classical method. The second method of course

burdens the Federal treasury, while the classical method does not.

The second method has the advantage over the classical method of strengthening, rather than weakening, the position of the working poor. It is certain to reduce poverty, while the classical method may increase it (though this is not certain).

C. THE NECESSITY OF AN EMPLOYER OF LAST RESORT

While efficiency requires primary reliance on regular producers, exclusive reliance is unsatisfactory. A guarantee means that each eligible person must be provided with a job opportunity. If the EIP subsidy is made large enough, then regular producers should create enough jobs for most job seekers who are eligible for the guarantee. In practice, however, it will obviously not always be possible to place an eligible person immediately in a regular job. The advantage of attaching subsidy to each certified person is that this assures that the number of potentially subsidized jobs will equal the number of certified persons seeking placement. Under EIP, where subsidy is not attached to each person, this can at best be approximated.

To implement the guarantee, a transitional job must be provided for each certified person until a regular job is found. There are several ways this can be done. The first is method three - the creation of special projects. These projects can be run by the Federal government in each local labor market. Or they can be run by state or local government, or private organizations with Federal subsidy. Second, persons can be placed with regular employers, with subsidy attached to each individual, but with severe restrictions so that substitution is limited. The difference between such jobs, and special projects supervised by regular employers, is only a matter of degree. The California Community Work Experience Program (CWEP), which will be analyzed shortly, utilizes restricted jobs with regular public employers.

While these approaches have their special features, the important point is that there is not much difference between them. None of these will be able to offer heads of households regular full-time jobs that are thoroughly integrated into the job structure of a regular public or private producer. Furthermore, these jobs will inevitably have lower productivity than regular jobs. The reason for this must be clearly understood.

If these jobs are supervised by regular public or private employers, then restrictions must be imposed to prevent the process of substitution just described. Substitution can only be prevented if the restrictions reduce the productivity of the jobs to the point that employers prefer unsubsidized employees. If these jobs are created in special projects, supervised by the Federal government, or by private organizations, then such direct substitution is not possible. Nevertheless, the danger of indirect substitution will limit the kinds of projects, and jobs, that can be created.

These special projects face a fundamental constraint. They cannot compete significantly with regular public or private producers. Their output cannot substitute for output that would have been produced by regular producers. Suppose, for example, that a special project attempts to keep city streets clean. Clearly, this will encourage the city government to cut back its own sanitation department, or at least expand it less rapidly than it otherwise would have. Indirect substitution is occurring. Unlike direct substitution, the city government is not itself hiring subsidized persons to replace unsubsidized employees. Instead, another organization - either the Federal government, or some private organization - is assuming the same function, enabling the city government to conserve its own resources. The effect on unsubsidized employees is the same.

It may be pointed out that indirect substitution is occurring only if the city government would have undertaken similar work had there been no special project. Thus, indirect substitution can be prevented - and can only be prevented - by restricting special projects to those that would clearly not have been

undertaken by the city government. But that is precisely the point. Presumably, city governments undertake some public services, and not others, because those undertaken in general are more highly valued by constituents. Thus, if special projects are restricted to those that do not compete with services provided by regular public agencies, they will in general be less productive. Their output will in general not be valued as highly as the output of regular producers.

Just as direct substitution can be expected to incur the opposition of unsubsidized employees, whose jobs are threatened, indirect substitution can be expected to elicit a similar response. It is hard to imagine unsubsidized employees of the sanitation department of a city government standing idly by while special projects take over responsibility for cleaning city streets. Even if such projects are restricted to "additional" clean-up, not currently undertaken by the regular sanitation department, resistance may be expected, since such projects will limit expansion by the regular sanitation department. Resistance can only be expected to disappear if the projects are so marginal and unproductive that it is inconceivable that the regular sanitation department would ever have undertaken them.

Most would regard such resistence as justified. Indirect substitution involves the same inequities as direct substitution. Under direct substitution, an employer prefers one worker to another, simply because he earns subsidy on one, and not on the other. Indirect substitution involves what many would consider unfair competition. If the city sanitation department contracts, laying off workers, it is because special projects were able to utilize subsidized labor, not because they are necessarily more efficient.

Because of the problem of indirect substitution, special projects must operate under a severe constraint. This does not mean such projects must be "make-work," implying they have no value for consumers. Regular producers do not undertake all output with positive value to consumers. The city government,

financed by taxpayers, cleans city streets to a point. Further cleaning may well have positive value to people, but perhaps not enough value to be worth the additional taxes.

It should also be realized that regular production is guided by effective demand expressed by consumers and taxpayers. It therefore reflects the distribution of income, and political power. For example, repairing housing in poor neighborhoods might have great utility to residents. Yet because they are unable to pay for it, it may not be profitable for private producers to make such repairs. The city government may not repair public facilities in such neighborhoods because there is less political pressure to do so. The point is that it would be a mistake to assume that only output now being provided by regular public or private producers has value to people.

While special projects therefore need not be valueless make-work, it must be concluded that in general such projects will have less value than the output of regular producers, because of the restrictions needed to prevent the inequities of indirect substitution. Jobs in such projects will, on the average, be less productive. An effort should be made to determine practical ways of improving the value of output of such projects, without causing indirect substitution. Projects run by private organizations may turn out to be more, or less, productive than projects run by the Federal government. It may be that restricted jobs supervised by regular public producers are more productive than special projects. Perhaps fostering a competition for Federal subsidy among private and public project supervisors might improve productivity.

While these issues should be explored, the necessity of limiting indirect substitution forces the conclusion that special projects and restricted jobs with regular employers should <u>not</u> be the mainstay of the guarantee. There should be maximum reliance on inducing full-time, regular jobs with regular employers through EIP. These last resort projects and jobs are better than nothing. Low productivity production is better than no production. Also, providing a job - even a transitional one - for all eligible per-

sons is essential if welfare is to be eliminated for all such persons. Thus, special projects and restricted jobs - in some combination - must be utilized. But every effort should be made to keep their role to a minimum. The aim should be to move persons out of such jobs into regular jobs as soon as possible, and to provide those jobs through the Employment Incentive Program.

An important constraint on last resort jobs, however they are provided, is that the wage must not be high enough to induce any influx of persons out of regular jobs. If the guarantee is imposed in the context of a universal minimum wage, then last resort jobs must pay less than this minimum. An alternative would be to allow the wage paid to exceed the minimum wage, but to try to restrict the influx through regulations such as making ineligible those who have quit their previous job. As is often the case, such regulations are likely to be a poor match for financial incentives.

The relatively low wage of the last resort jobs need not weaken the effort to raise low earnings. As presented in Part II, EIP combined with a relatively high and extensive minimum wage, should be the basis of such an effort, provided the EIP maintenance of effort index proves feasible. Such a strategy aims at increasing the number of above poverty level job slots existing at any point in time in the economy. Each head will hold a last resort job for only about four weeks, before being moved into regular employment. Thus, a low last resort wage is not a serious problem.

Chapter 4

CURRENT EXPERIMENTS AND ALTERNATIVE PROPOSALS

In this section, several current experiments and proposals will be evaluated in light of the principles developed thus far.

A. THE CALIFORNIA COMMUNITY WORK EXPERIENCE PROGRAM (CWEP)

CWEP was proposed by Governor Ronald Reagan, and approved by HEW as a demonstration project.[1] It began in July, 1972, and is currently operating in 15 counties in California, although its status is in doubt because of legal and legislative challenges. From July 1972 to May 1973 about 16,000 persons in these counties who applied for welfare (Aid to Families With Dependent Children) were classified as employable. Of these, about 6,700 entered regular employment, 2,700 were placed in training, over 1,500 were placed in special CWEP jobs, and over 2,700 were subject to sanction for refusing to meet the work or training requirement. Thus, CWEP provided jobs for about 10% of all employables in these counties, according to data from the California Department of Human Resources Development.

CWEP tries to achieve the minimum objective of a guarantee. Assistance is guaranteed for family heads capable of work ("employables"), provided they are willing to work. If the head cannot be placed in regular employment, or WIN training, he is guaranteed a CWEP job. CWEP positions are created in regular

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1. This description of CWEP comes from the following sources: State of California [5]; State of California, Department of Human Resources Development [4]; State of California Department of Human Resources Development [3].

public or non-profit agencies. The jobs must be part-time, and work cannot exceed eighty hours per month (half-time). The public agencies do not pay the CWEP employees. Instead, the employee earns his welfare check by performing the CWEP job. In effect, the public or non-profit agencies get free, part-time labor.

CWEP jobs are considerably less attractive than most. They are part-time jobs. The employee does not even receive a pay check, but continues instead to receive welfare payments, and to be regarded as a welfare recipient. He is so labeled at his workplace. The implicit wage for his work, the ratio of his welfare grant to his hours of work, is not allowed to fall below the state or Federal minimum wage, whichever is higher, but it is usually not much above this floor. Since the person is limited to half-time work, a CWEP jobs pays well below the poverty level. Clearly, the intention is to create a strong incentive for the CWEP employee to find regular employment.

The absence of a paycheck has been a major criticism of CWEP. In an article on CWEP, the Wall Street Journal wrote:

> But with a paycheck, "you could say you're off welfare," and the stigma of being a welfare recipient would be gone, argues Mr. Bayuga, the CWEP participant who counsels students. Retorts State Welfare Director Robert B. Carlson, "In practice, its the same thing as a paycheck. If he doesn't show up, he won't get paid." Anyhow, Mr. Carlson adds, CWEP wasn't designed as a welfare cure-all but rather as temporary community service while a welfare client continues to look for full-time work.[2]

It must be recognized that a major purpose of CWEP was to discourage employable persons from seeking welfare assistance. Governor Reagan has explained that this approach should eliminate from the welfare rolls persons able but unwilling to work. Further, it

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2. Wall Street Journal [59], October 20, 1972.

is designed to encourage persons to find regular jobs, and therefore not depend on government for assistance, even in the form of work projects. If the intention is to induce family heads not to turn to government for aid, then retaining the stigma in CWEP supports this objective.

In the earlier analysis, it was asserted that there should be primary reliance on regular producers, private and public, to provide the jobs needed to support a guarantee. CWEP does attempt to rely on regular public producers, and non-profit producers, rather than create special exclusively CWEP projects. Yet it does not seek to take advantage of the major benefit of such a strategy. The reason for relying on regular producers is to increase the productivity of persons employed, and to integrate them into the mainstream of economic activity. CWEP subsidizes these regular producers to induce them to accept persons. But the restrictions of part-time work, no pay check (lack of integration into the wage and job structure of the regular producer), welfare status, and low pay prevent the potential benefits of employment with regular producers. CWEP placement with regular producers accomplishes little more than would special CWEP projects run exclusively for CWEP employables. Neither productivity, nor integration into the regular workforce, would be much less. It is true that administrative costs are certainly less, and this partially explains why such placement with regular producers is preferred. But from the point of view of the recipient, or productivity, little is gained.

Why does CWEP not attempt to take advantage of the benefits of reliance on regular producers that were analyzed earlier? There are several reasons. First, subsidies large enough to induce regular producers to hire additional full-time workers, in regular job slots paying regular wages, would significantly increase the cost of the program. Second, those who formulated CWEP do not envision employment subsidies to regular producers in order to increase the number of regular job slots in the economy as a desirable or necessary strategy. The logic for such a strategy was argued in Part II, but it is certainly not widely

accepted. They did not ask: What are the potential benefits that can be achieved by subsidizing regular producers to increase regular employment? Instead, they asked: Should we create special CWEP projects, or should we use regular producers to accomplish the same limited objective of part-time, low productivity work? Given the lower administrative costs, the choice made was sensible.

There is a more fundamental reason why CWEP would have great difficulty improving the productivity of the jobs into which their clients are placed, even if the intention was to do so. Like virtually all manpower and employment programs aimed at assisting particular persons, subsidy is attached to the particular person being aided. Nothing could be more natural and convenient. Instead of subsidizing employers to expand their number of job slots, regardless of who fills the slots, these programs quite naturally subsidize employers for hiring particular persons.

Yet the problems of this natural approach were analyzed at length in Part II. Any program that does so will be plagued by the fundamental problems of maintenance of effort, and substitution of subsidized for unsubsidized employees. It is for this reason that the Employment Incentive Program was designed differently from virtually all programs with the same objective. The Employment Incentive Program involves a fundamentally different method of subsidizing increased employment in regular producers, from the method normally used, and utilized by CWEP. Yet some of the practical problems of CWEP, and WREP program to be described, and virtually all other approaches to the guarantee are derived from this same source.

Since CWEP subsidizes public and non-profit agencies to employ certified heads of households, the problem of maintenance of effort and substitution of CWEP for non-CWEP employees inevitably arises. The CWEP application contains the following provision, aimed at these problems:

> The work-experience activities selected will involve only otherwise unfilled genuine public needs. Jobs already held by employees in the public and private sectors will not be jeopardized. The program does not apply to jobs covered by a collective bargaining agreement nor shall any individual be required as a condition of accepting work to join any company union or to refrain from joining a labor organization.[3]

While the intent is clearly to prevent substitution, no means of enforcement is described. Several aspects of CWEP should somewhat limit substitution, though a significant problem may well remain. Since CWEP jobs cannot be jobs covered by collective bargaining, agencies cannot cut back on such jobs or regular employees. The disadvantage of this restriction, however, is that many useful jobs are not open to CWEP employees. CWEP jobs must be part-time. While a significant number of full-time jobs may be convertible into part-time jobs, many others probably cannot be. The reluctance of the agency to do this is further supported by the inevitable high turnover among CWEP employees, due to the part-time restriction and the implicit low pay.

In other words, CWEP may be able to contain these fundamental problems by limiting the quality and pay of CWEP jobs. If CWEP subsidized these employers to hire family heads into full-time, adequate wage positions, without restrictions on the kind of work they can perform, then these problems would be far more serious. The CWEP solution to these problems therefore has the serious disadvantage of providing unattractive, part-time employment, with lower economic productivity.

Even CWEP jobs, however, may induce cutbacks, and substitution. The CWEP experience thus far does not offer sufficient evidence. Public agencies must fully anticipate CWEP, and plan

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3. See Footnote 1, this chapter.

their budgets with CWEP in mind. Not only is CWEP a relatively new program; its future has been in doubt continuously because of legal challenges, and political uncertainties. No local government has been able to count on CWEP in planning its budget. If CWEP survives legal and perhaps political challenges, and is perceived by local governments as relatively permanent, only then will public program agents begin to adapt to it. If this occurs, public agencies will for the first time make a serious effort to use CWEP to save their own resources. At that point, the problems of maintenance of effort and substitution among employees will surface.

B. NEW YORK CITY'S WORK RELIEF EMPLOYMENT PROJECT (WREP)

WREP is a demonstration project just beginning in New York City.[4] It attempts to substitute employment for welfare for Home Relief recipients (welfare recipients who are not covered by AFDC, but are aided by the state Home Relief program). WREP goes a step beyond CWEP. The central difference is that WREP attempts to provide a job that is an alternative to welfare; the intention is for the job to be as productive as possible. WREP replaces the welfare check with a pay check.

Under WREP, persons are placed in regular jobs in public agencies. While CWEP jobs have a maximum of half-time, WREP jobs are a minimum of half-time. The WREP manual states:

> In order to allow the creation of conditions which simulate regular employment and to maximize worker productivity, every WREP eligible will be guaranteed a minimum of half-time employment.[5]

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4. This description of WREP comes from the following sources, as well as from conversations with Sandy Warren of the New York City Human Resources Administration: City of New York Human Resources Administration [29]; City of New York [27] City of New York, Department of Social Services [28].

5. See Footnote 4, this page.

The intent of WREP is to offer a regular, full-time job, if possible. The reason for part-time employment is financial. The WREP subsidy to public agencies comes out of Home Relief funds, which in most cases cannot support more than part-time employment at the going wage. The equal pay for equal work principle is not violated, so that WREP workers earn the same hourly pay as regular workers performing the same work. But as a result, the number of hours worked must be reduced. If more funds were made available, WREP would try to provide full-time jobs, wherever possible. While CWEP jobs may be intentionally unattractive, as a spur to recipients to find regular jobs, the intent of WREP seems to be to provide more adequate jobs.

Unlike CWEP, WREP jobs are expected to be the same type usually performed in the public agency. No attempt is made to exclude jobs covered by collective bargaining, as in CWEP. Thus, WREP jobs should be similar to those jobs funded by the Public Employment Program (authorized by the Emergency Employment Act of 1971) that required relatively little skill; the portion of PEP jobs aimed at the more disadvantaged among the unemployed. While both PEP and WREP fund temporary jobs, these jobs are similar to regular agency jobs. For example, an agency with six playground supervisors can add a seventh who performs the same task, under both PEP and WREP. If these jobs were covered by a collective bargaining agreement, however, or had to be done full-time, then they could not be funded by CWEP.

Thus, WREP has the advantage of offering more productive jobs. With increased funding, these jobs could become full-time jobs. WREP would then, however, face a serious maintenance of effort and substitution problem. Public employers would try to conserve their own resources. Once WREP were perceived as permanent, they would plan their own budgets with WREP in mind. Public agencies would fund less jobs out of their own revenues, and fill more jobs through WREP, in order to receive subsidy. The only limit to this indirect substitution would be the lower quality of WREP referrals. It is possible, however, that the quality would increase. Persons seeking public employment,

though qualified and non-disadvantaged, might find it useful to first qualify for Home Relief - if pride permits - in order to be referred to a public agency through WREP. This route might be more fruitful than getting on a civil service list. If this practice increased, the stigma would be reduced, and the process might accelerate.

Clearly, if WREP is envisioned as a long-term, permanent program, an alternative method of subsidizing regular public employers will have to be devised - one that counters the problems of maintenance of effort and substitution of subsidized for unsubsidized employees. In Part II, analysis of this dilemma led to the design of the Employment Incentive Program as the best feasible method for treating these problems. As was noted in Part II, EIP can be restricted to public employers if this is desired, although the costs as well as benefits of doing so were weighed in Part II.

In sum, WREP goes beyond CWEP. WREP does ask the question: how can the full benefits of placing persons with regular employers be realized? If WREP receives funding so that it can move towards providing regular, full-time jobs, the problems of maintenance of effort and substitution among employees will become serious, requiring a reexamination of the basic design of the subsidy.

C. THE SENATE FINANCE COMMITTEE'S GUARANTEED JOB PROPOSAL

In its consideration of the President's proposed Family Assistance Plan, the Senate Finance Committee rejected that plan, and instead proposed a guaranteed job opportunity for family heads.[6] While neither this proposal nor FAP passed Congress in 1972, the

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6. U.S. Senate, Committee on Finance [54], p. 67 and [53], April 28, 1972.

Committee's alternative warrants careful consideration. It represents the closest Congress has ever come to enacting any kind of guaranteed job program.

The Committee proposed eliminating able-bodied family heads from eligibility for Aid to Families with Dependent Children, unless they have small children in their care (no spouse). In place of welfare, however, the Committee proposed guaranteeing an opportunity to work. The Committee envisioned three methods for securing employment. The first was simply an intensive effort by the Employment Service on behalf of the individual. The other two involve special programs, however.

The second method would be to subsidize low wage, regular jobs. This would apply only to jobs not covered by the Federal minimum wage, paying below that wage. The Federal government would pay three-fourths of the difference between the wage and the Federal minimum. The aim would be to induce increased employment in these jobs. Since only a fraction of the wage would be subsidized, this technique would be cheaper than the third method, which requires the Federal government to pay the entire wage.

The third method would be to provide part-time, Federally funded employment. In its description of its plan, the Committee does not make clear whether these jobs would be created by a special Federal agency, or merely arranged for by such an agency. In the latter case, the jobs would be in regular public agencies, like CWEP or WREP, with the Federal government paying the wage.

The second method may at first glance appear similar to the Employment Incentive Program. As in EIP, subsidy is used to induce an increase in employment among regular producers. Yet there is a fundamental difference between EIP and the Committee subsidy. EIP is a high wage subsidy. EIP subsidizes only employers who pay at least the Federal minimum wage. Furthermore, the subsidy applies to all nonsupervisory jobs, regardless of how high a wage they pay. It therefore aims to increase the number of relatively high wage nonsupervisory jobs in the economy. In contrast, the Committee's subsidy is a low wage subsidy, restricted to jobs

that pay below the Federal minimum wage.

The difference between the high wage subsidy embodied in EIP, and a low earnings supplement (proposed by Haveman), similar to the Committee's subsidy, is discussed at the beginning of Part II. There it was pointed out that a low wage subsidy will favor low wage firms over high wage firms. Low wage competition will therefore be increased. The wage cost borne by these low wage employers will be reduced. High wage employers in the same industry will have to lower prices to match the lower prices of low wage firms. To do this, they will have to reduce wages. Otherwise, their market share will be less, and high wage employment will contract. The impact of low wage competition will differ among industries. Its reality is confirmed by the strong support of high wage union firms for the minimum wage law, which has the effect of reducing low wage competition. Needless to say, this part of the Committee's proposal will not be greeted kindly by the AFL-CIO.

The Committee is unfortunately vague about how last resort, part-time employment would be provided. The Committee report states the following:

> For these individuals who cannot be placed immediately in regular employment at a rate of pay at least equal to the minimum wage, or in subsidized private employment, the major emphasis would be on having them perform useful work which can contribute to the betterment of the community. A large number of such activities are currently going undone because of the lack of individuals or funds to do them. With a large body of participants for whom useful work will have to be arranged, many of these community improvement activities could now be done.[7]

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7. U.S. Senate, Committee on Finance [54], p. 67, and [53], April 28, 1972.

While the report does not explicitly say so, it is likely that the Committee has in mind placing persons in regular public agencies - local, state, and Federal. The Committee wrote the fifty state governors, asking them how many useful jobs could be created for welfare recipients, in state and local government. There is no indication that the Committee envisions the creation of a special Federal agency that would actually run work projects of its own. It is possible that the Committee has such an agency in mind, however.

The Senate Committee proposal states that these jobs should be part-time, and pay three-quarters of the Federal minimum wage. Setting the wage may create problems if the jobs are in regular public agencies. Unless the jobs are different from jobs currently being performed, the principle of equal pay for equal work may be violated. Both CWEP and WREP are flexible about wages and hours. Monthly earnings are kept low by adjusting the hours the person works per month. As a result, the wage can be set so that it fits equitably into the wage structure of the agency. The Committee may have to treat the wage more flexibly, and adjust hours worked to achieve the desired target monthly earnings.

The Committee proposal offers no method for containing the maintenance of effort and substitution problems, other than the fact that the work is part-time. If the person is placed in low wage, subsidized private employment, no attempt is made to maintain effort. All persons are subsidized, regardless of whether they would have been hired without the subsidy. In the public jobs, the Committee is aware of the problem:

> At the same time, it is recognized that safeguards are needed so that the program meets the goals of opening up new job opportunities and does not simply replace existing employees, whether in the public or private sector.[8]

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8. U.S. Senate, Committee on Finance [54], p. 67, and [53], April 28, 1972.

Unfortunately, the Committee does not describe how it intends to safeguard existing jobs and employees. Apparently, the CWEP approach - restricting the jobs to part-time - will be utilized. As discussed earlier, even if jobs are part-time, there should still be an incentive for public employers to restructure some full-time jobs into part-time slots, to earn subsidy; and to replace current part-time employees with subsidized family heads referred by the local Employment Service.

Thus, there are three options for the last resort section of the Committee proposal. CWEP can be followed; the problems of maintenance of effort and substitution can be contained by restricting the jobs to part-time, and limiting the wage paid. WREP can be followed; jobs can be made more productive and better integrated into the producer's operations, but then maintenance of effort and substitution will become serious problems. Finally, special Federal work projects can be created. Like CWEP, the productivity of these jobs will be low, but there will be no problems of maintenance of effort and substitution. The Committee does not clarify which of these approaches it intends to follow.

D. A HIGH WAGE PUBLIC EMPLOYMENT GUARANTEE

A more ambitious proposal has been offered by Arnold Packer, in a paper prepared for the Subcommittee on Fiscal Policy of the Joint Economic Committee.[9] Under this proposal, every family containing two able-bodied adults under 65, and at least one child would be guaranteed one full-time job paying one-half the median family income (that one person would be the de facto head of the household). This would be about $5,000 in 1970, or a wage of $2.50 an hour for a year-round, full-time job; in 1973, the cor-

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9. Packer [32].

responding wage would be about $2.90.[10] If one family member already has such a job, then another family member would not be guaranteed such a job.

While Packer does a careful analysis of the eligibility and cost aspects of the program, he unfortunately devotes little attention to how the jobs would be created. He writes:

> The Employment Service would be required to maintain a list of what we will call "special" public sector openings so that it would always be able to accommodate any applicant not placed in private or regular public sector jobs.[11]

He asserts that persons could be employed in day-care centers, schools, hospitals, transportation facilities, and so on. It appears he envisions persons being placed in regular public agencies, while subsidized by the Federal government, rather than in special Federal projects - though perhaps he is open to this possibility.

The first question that a high wage guarantee must answer is how it will prevent a large influx of household heads from regular jobs that pay a lower wage? The size of the influx will be determined by how employers respond to the guarantee. Employers have three options. First, they can raise the wage of all employees to the guarantee level, in order to retain them. Second, they can raise only the wages of heads of households, since only these are eligible for the guarantee. They would thereby attempt to violate the principle of equal pay for equal work. Third, they can refuse to match the guarantee wage, and settle for employing only non-heads. Undoubtedly, there will be significant fractions of employers who pursue each of these options.

The burden on the guarantee will be greatest to the extent

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10. See Part II, Chapter 1, Footnote 8.

11. Packer [32], p. 82.

that the third option is pursued. Under it, employers will in effect substitute non-heads for household heads. By refusing to compete for heads with the public agencies supporting the guarantee, they will induce virtually all heads paid less than $2.90 an hour to take advantage of the guarantee. Although many employers will not pursue this course, it is useful to calculate what the impact would be if this option were pursued by all employers. In Part II, it was estimated that in 1973, roughly five million heads of households were in jobs paying less than $2.40 an hour. A reasonable extrapolation is that double that number, or about ten million heads, were in jobs paying less than $2.90 an hour in 1973.[12]

The burden on the guarantee will be least if the first option is pursued. Under it, employers match the guarantee wage for all their employees. Under this assumption, the effect is the same as that of a universal minimum wage of $2.90 per hour. Even here, the burden will be very large. In Part II it was estimated that an extensive minimum wage of $2.40 in 1973 would reduce employment by roughly two million jobs. A reasonable extrapolation is that a $2.90 minimum wage would reduce employ-

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12. In April 1970, according to Sternlieb and Bauman [35], p. 11, there were 11 million jobs paying less than $2.00, and 9 million between $2.00 and $2.50. These figures provide a rough estimate for the number of jobs less than $2.40, and between $2.40 and $2.90, in 1973, since the average hourly wage advanced about $.40 between 1970 and 1973. Household heads have a larger share of the jobs between $2.40 and $2.90, than of jobs paying less than $2.40. It is estimated that while heads have about 5 million out of the 11 million jobs under $2.40, they have about 5 million out of the 9 million between $2.40 and $2.90. This estimate is based on the fact that in 1970, heads of households were roughly half of all the employed, according to the U.S. Manpower Administration [49], 1972, Table B-3, p. 194, and Table A-1, p. 157. This fraction should be a bit greater than half for higher paid workers, just as it is lower than half for lower paid workers.

ment by roughly double this amount, or four million.[13] Not all of these will be heads of households, however. A rough estimate is that two million heads will have to make use of the guarantee.

The burden on the guarantee will be intermediate if the second option is pursued. Clearly, less heads will leave their regular jobs for the guarantee if employers match the wage of the guarantee. On the other hand, if employers are able to pay non-heads less than heads, they will have an incentive to substitute non-heads for heads. This is not the case if the wages of heads and non-heads alike are raised to $2.90.

The burden on the guarantee is not confined to the influx out of regular jobs. The influx out of unemployment, and from increased labor force participation must be added. In March 1972 there were about 1.2 million heads unemployed, with the national unemployment rate at 5.9%. Even if the national unemployment rate is reduced to 4.5%, the number of unemployed heads will not fall much below a million. The impact on labor force participation should not be large, bacause most heads are already in the labor force.

While all three responses will be pursued by employers, it is likely that option one will dominate. Many employers cannot do without heads of households. The force of the equal pay for equal work principle, and its effect on employee morale, will in most cases require raising all wages to the guarantee level. Of course, those employers that do rely primarily on non-head labor will pursue option three. Thus, the reduction in jobs for

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13. According to Sternlieb and Bauman [35], p. 11, the average wage of jobs below $2.50 in 1970 was about $2.00. Thus, in 1973, the average wage below $2.90 would be about $2.40. Thus, if all wages were raised to $2.90, the average increase would be about $.50, or 20% of $2.40. If the elasticity of demand is again assumed to be about one, this should reduce the number of jobs by about 20%. Since there were 20 million jobs below $2.50 in 1970, or $2.90 in 1973, there would be a loss of about 4 million jobs.

heads should be closer to the lower bound of two million than to the upper bound of ten million. The burden of heads on the guarantee will be about a million larger, because of the unemployed. Thus, a rough estimate is that the burden on the guarantee will be, very roughly, about four million. Packer estimates, by a different technique, that about three million full-time jobs, and at least another one million part-time jobs will be needed. In either case, it is clear that the burden on the guarantee of a $2.90 guarantee in 1973 would be very large.

The burden could be reduced towards the lower bound of two million if the minimum wage were raised to $2.90. Packer advocates a low minimum wage policy, however. He explains that the minimum wage has been set relatively high to protect heads. If they are protected by the guarantee, then a low minimum wage can increase employment for teenagers and second earners without harming heads.

The less the burden on the guarantee, the greater will be the impact on wages and prices. Less heads will leave their jobs for the guarantee if employers try to retain them by raising wages. In Part II, a high minimum wage strategy was proposed, with a wage of $2.40 an hour for 1973. A wage of $2.90 an hour would have a significantly greater impact on the wage structure, and prices.

While the choice of a $2.50 guarantee level for 1970, and therefore, of a $2.90 level in 1973 raises serious problems, more fundamental questions relating to the design itself must be asked. In his proposal, Packer completely ignores the problems of maintenance of effort and substitution among employees. Yet these problems would be far greater in his program than in the less ambitious CWEP and even WREP programs. Clearly, the local, state, and federal agencies that support the guarantee would begin to hire many of their employees through the local Employment Service, rather than directly, in order to have them completely subsidized. This would greatly raise the cost of the program to the Federal government.

The main obstacle to this process would be a restriction on

the wage paid by the public agency. If the wage paid must be roughly $2.90, and cannot be supplemented by the public agency, then most public employee jobs will be ineligible. While this will limit substitution, it will completely undermine the capacity of the public agencies to provide useful jobs, since regular jobs in public agencies of course pay varying wage rates. Unless the principle of equal pay for equal work were violated, the number of jobs available would be limited. If this principle were violated, then public agencies would have a strong incentive to bring persons in at the $2.90 wage (free to them) to replace regular employees. Employee resistance, with or without unions, would be severe.

Thus, Packer does not explain how a set wage can be integrated into the structure of the public agencies that must support the guarantee. If $2.90 is simply a floor that can be supplemented by the public agencies, then persons making more than $2.90 may quit their jobs and apply for the guarantee, in the hope of receiving a still higher paying job. Unless the $2.90 wage is a ceiling as well as a floor, the influx probl m will escalate. If the wage is rigid, however, then the capacity of public agencies to provide jobs will be greatly limited.

It will instructive to see how these problems are handled under the high minimum wage-Employment Incentive Program approach to the guarantee. The minimum wage is set for virtually all employers. Then the EIP subsidy rate is raised until the regular employers create enough nonsupervisory jobs to accommodate most heads of households seeking work. Since these employers must pay the minimum wage, that wage is achieved for most heads of households. Finally, the inevitable residual, who cannot find a regular job because the EIP subsidy rate has only been approximately correct, is cushioned with transitional jobs in special projects. For this group, the wage will be below the minimum wage as long as they hold their transitional job.

Under this approach, there is no problem of integrating the subsidized job and its wage into the regular job and wage structure of the employer. All nonsupervisory jobs count towards subsidy,

regardless of the wage they pay. The floor is achieved by the minimum wage, not by the guarantee. As discussed at length in Part II, EIP embodies a new approach to the maintenance of effort problem, utilizing an objective maintenance of effort norm. While important practical problems must be overcome in the construction of this index, it is the only way to prevent this problem from undermining any subsidy program. EIP eliminates the problem of substitution of subsidized for unsubsidized employees by divorcing subsidy from particular persons, as explained earlier.

The high minimum wage-EIP staategy can achieve a relatively high wage for most heads. Those who cannot be placed immediately, however, cannot be guaranteed a job at a relatively high wage, or the influx problem would become severe. While Packer's proposal is therefore more ambitious, it is seriously vulnerable to the fundamental problems of maintenance of effort; substitution among employees; integration of the subsidized employees into the job and wage structure of the public agencies; the limited capacities of the public agencies to provide jobs under the rigid wage constraint. Less fundamentally, the magnitude of the wage he proposes will produce an influx into the public sector that is large enough to be economically inefficient; at least an important fraction of those who shift from private to public sector would probably have been more productive had they stayed in the private sector. The size of the influx will also create capacity problems for the public agencies, even if there were no rigid wage constraints. And the upward pressure on the wage structure and prices is bound to be significant.

E. A SPECIAL PROJECTS APPROACH

Under this approach, primary reliance for providing jobs to support the guarantee would not be placed on regular employers. Even restricted jobs - such as those created by CWEP - supervised by regular employers would not be utilized. Instead, new organizations, and ad hoc projects would be subsidized. The argument behind this approach is that there are useful jobs in the com-

munity that need to be done, and there are often community organizations, or ad hoc groups of individuals willing to do them, if only funds were provided.

Special projects run by private organizations may prove useful in performing the limited, last resort role. It would be a serious mistake, however, to rely on such projects to carry the main burden of the guarantee. In this context, it is essential to stress once again why it was argued that the vast majority of jobs needed to implement the guarantee should be induced in regular employers by the Employment Incentive Program, and that the special projects should have the limited role of handling the residual during a transitional period until they can be placed in a regular job. First, almost all recipients prefer to be integrated into the mainstream of economic activity, rather than be isolated in special projects. A job with a regular employer, private or public, in general offers more security, and opportunities for advancement. The recipient will usually regard the job as more genuine, and his morale will usually be higher. This is particularly true under EIP, in which subsidy is not attached to any particular person, thereby preventing stigma.

Second, regular employment will in general be more productive, and therefore be preferred on the grounds of economic efficiency. Regular production, in the private or public sector, is in general being performed, and is "regular," because the output has sufficient value to consumers or taxpayers that they are willing to pay more than its cost to obtain such output. While special projects may be useful, they will in general not be as productive - this is why they weren't being performed by regular producers in the first place. This principle will have exceptions, but given the large number of jobs that must be provided, there can be little question that it will be more economically efficient to rely on regular producers than on special projects.

Third, administrative efficiency points to relying on regular employers. This is especially true with EIP, where the technique is to create incentives for employers, but to minimize direct interference, and monitoring. All of the production deci-

sions can of course be left to the regular producer, greatly simplifying adminstration. Special projects, in contrast, require more monitoring, and supervision. This is particularly true if an effort will be made to meet the special needs and problems of each ad hoc group. While such special attention is sometimes put forward as a desirable feature, reflecting sensitivity and lack of impersonality, such an approach will be impossible to administer on a scale large enough to truly support the guarantee.

Chapter 5

THE SCOPE, COSTS, AND BENEFITS OF THE GUARANTEE

It should be stressed that only very rough estimates will be given in this section. It will at first be assumed that the national unemployment rate, in the absence of the Employment Incentive Program and the guarantee, would be held to 4.5% by standard fiscal and monetary policy, and by the counter-cyclical Anti-Recession Program, described in Part I. It is further assumed that unemployment is distributed fairly evenly throughout the country. Later, the impact of recession, and geographical unemployment - often ignored in guarantee proposals - will be considered.

A. THE GUARANTEE IMPOSED ON AN INITIAL NATIONAL UNEMPLOYMENT RATE OF 4.5%

When the national unemployment rate is 4.5%, the number of heads of households who are unemployed is a little over one million, out of a total number unemployed just under four million. Through the Employment Incentive Program, it would not be desirable or feasible to try to provide one million additional jobs for heads. There will always be frictional unemployment, as persons switch jobs. Some unemployment due to seasonal fluctuations is inevitable, though need not be as high as it currently is. Some unemployment is caused by persons entering the labor force. R.A. Gordon gives the following estimate:

> How high is total frictional (including seasonal) unemployemnt in the United States today? The estimates available range from about 3 percent down to a little over 2 percent. The 3 percent figure includes some unemployment that I should call structural, resulting from above-average rates of turnover and/or longer-

> than-average search time among such groups as teenagers, young adults, blacks, and the unskilled generally.[1]

If roughly half of household head unemployment is regarded as an irreducible, frictional minimum, then to provide most of the jobs needed to support the guarantee, EIP should try to induce about a half million more jobs for heads of households. An essential feature of EIP, however, is that employers are subsidized to increase employment, without attaching subsidy to any particular persons. Thus, to provide a half million jobs for heads of households would require, very roughly, a million additional jobs. (Although heads are only about one-third of the unemployed, they are in general more attractive to employers and should get more than their share of any additional jobs). In Part II, it was estimated that it would cost EIP roughly $4 billion to provide one million additional jobs, if EIP applied to both private and public employers.

One million additional jobs would reduce the national unemployment rate by about 25%, from the initial 4.5% to about 3.5%. It must be stressed that this would be achieved by an important structural change in the economy - the reduction of money wages paid by employers relative to prices. Most economists believe that if the money wages paid employers are reduced, that a lower level of unemployment can be achieved for a given rate of inflation. Indeed, this is the classical prescription for reducing unemployment. The classical solution is considered impractical because money wages are "sticky downwards." Yet a reduction of money wages to employers (without reducing the wages received by employees) could be achieved by a subsidy such as EIP. This contrasts with an attempt to reach 3.5% without reducing the money wages paid by employers, as occurred in 1969. Such an attempt caused serious upward pressure on prices.

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1. Gordon [14], p. 26.

If the guarantee is envisioned as part of a high minimum wage strategy, described in Part II, then it will be implemented in the context of an almost universal minimum wage of, say, $2.40 an hour in 1973. In Part II, it was estimated that, in order to hold employment constant with a minimum wage of $2.40, the Employment Incentive Program would have to induce roughly two million jobs, at a cost of $8 billion. Since the guarantee requires an additional one million jobs, at a cost of $4 billion, the Employment Incentive Program must induce a total of three million jobs, at a cost of roughly $12 billion.

While most of the cost will be incurred by the Employment Incentive Program, the last resort function will also require expenditure. A rough estimate can be derived as follows. The total number of persons who experience unemployment at some point during a year is about three or four times as large as the stock of unemployment at any point in time.[2] If there are a half million heads unemployed at any point in time, about two million will pass through unemployment during the year. We need to estimate the cost of providing short-term employment and placement assistance to these two million heads.

In 1970, roughly $300 million was spent by all the state Employment Services for placement;[3] about 15 million applicants were accepted, and two million, placed.[4] The cost per person placed was about $150. Assume that it takes about a month to place each head (The average length of a spell of unemployment in 1969 was estimated to be about five weeks, even without special placement assistance, for all the unemployed, not just the

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2. U.S. Department of Labor, Bureau of Labor Statistics [42'], August 1972.

3. Ruttenberg and Gutchess [34], Table 1, p. 15.

4. U.S. Manpower Administration [49], 1973, Table F-10, p. 236.

more attractive heads of households.[5] The national unemployment was well below the initial 4.5% level in 1969; but EIP should also lower the unemployment rate well below the initial 4.5% level.) If the person worked in a special project for a month, at $2.00 an hour, his wage cost would be about $300. Assume non-labor project costs double this figure to $600 per person. Then the cost per person (placement plus project costs) would be about $750. For two million heads, this yields an annual cost of about $1.5 billion.

Thus, a very rough estimate of the gross cost of the guarantee, combined with a high minimum wage strategy that would have provided a $2.40 wage floor in 1973, would be $13 billion. About $12 billion would be spent on the Employment Incentive Program, and $1 billion on placement and last resort transitional employment. In Part II, the cost of EIP in the high minimum wage strategy was $8 billion. It should be stressed that the guarantee adds roughly $5 billion to this $8 billion. The $13 million figure includes the cost of the high minimum wage strategy. If the guarantee were attempted without a high minimum wage, the estimate of its gross cost would be $5 billion.

It should also be emphasized that the net cost of the guarantee should be significantly less than the gross cost. The guarantee will reduce the costs of unemployment compensation, and public assistance. Furthermore, those who get regular jobs will of course pay taxes. In Part I, it was estimated that the net cost of the counter-cyclical Anti-Recession Program was only one-third of its gross cost. While an estimate of the net cost of the guarantee will not be given, it is likely that the net cost will not be more than half of the gross cost. Thus, the net cost of the guarantee combined with the high minimum wage strategy should not exceed $7 billion. The net cost of the guarantee without the high minimum wage should not exceed $3 billion.

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5. Kaitz [19].

B. THE IMPACT OF RECESSION AND GEOGRAPHICAL UNEMPLOYMENT

Most proposals for a guaranteed job opportunity ignore the impact of recession and geographical unemployment. Yet the moment these are recognized, the difficulty of achieving an effective guarantee should become apparent. Unless the guarantee is accompanied by methods of controlling both of these, the proposal goes forth in an unrealistic vacuum.

Consider the difficulty of trying to guarantee a job opportunity if the national unemployment rate, without the guarantee, would be 6.0%, instead of 4.5%. Between March 1970, when the national unemployment rate was 4.4%, and March 1971, when the rate was 6.0%, the number of unemployed household heads rose from 972,000 to 1,350,000.[6] Thus, an additional 400,000 jobs for heads would have to be provided. Since heads will get only roughly half of all EIP-induced jobs, about one million additional EIP jobs will be required. This will cost an additional $4 billion. Thus, the burden on the Employment Incentive Program would be 30% greater.

This required 30% increase in jobs created, however, is not the most serious consequence of recession for the guarantee. In Part I, data were presented showing the speed with which unemployment usually rises in a downswing. The trough is usually reached within a period of one year. The Employment Incentive Program is not designed for rapid counter-cyclical response. The EIP subsidy rates must be set so that the long run response of private and public producers will be to shift their factor proportions in favor of nonsupervisory labor. Such shifts cannot be expected to occur significantly in the short run.

It follows that the Employment Incentive Program will not be able to respond effectively to the 30% increase in jobs needed.

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6. U.S. Manpower Administration [49], 1973, Table B-3, p. 167.

The burden, therefore, will be shifted to the special projects that provide last resort employment. As stressed earlier, these projects cannot displace output of regular public and private producers. Given this severe constraint, they are likely to be less productive. This would be especially true if they had to absorb a sudden large influx of persons because of a rapid rise in unemployment.

Clearly, the result would be widespread make-work. The special projects would simply not be able to provide even moderately productive jobs for so many more persons. This does not mean that the guarantee must be formally suspended in recession. It does mean, however, that the job opportunity provided would often be very unproductive. If the recession is allowed to occur, it would be better to keep the guarantee, in spite of the reality of make-work. The guarantee, like unemployment compensation, would play an important role as an automatic stabilizer. It would become as much a transfer program, as a job creation program, however. It would be better than doing nothing.

Nothing, however, is not the only alternative. In Part I, a more effective way to counter recession was described and analyzed. It was shown that the proposed Anti-Recession Program should be able to keep the national unemployment from rising significantly above a trigger level of between 4.5% and 5.0%. Clearly, ARP is a much more economically efficient way to treat recession than the guarantee. Under ARP, jobs are provided by both regular public and private producers. The public jobs are financed by direct grants from the Federal government to state and local governments. Through the multiplier, private employers are able to create additional jobs. These jobs are as productive as regular jobs in the economy, for the simple reason that they are regular jobs. This approach is therefore much more efficient than low productivity jobs in special projects. Even the latter - and, therefore, certainly ARP - is more efficient than the unemployment of recession.

Geographical unemployment also increases the burden on the guarantee. Areas with chronic, long-term unemployment will have

to create a large number of jobs, relative to their total employment, to implement the guarantee. If the high unemployment is long-term, then the Employment Incentive Program can set its subsidy rate at a high level, to absorb most of the burden. EIP makes nonsupervisory labor cheaper to employers, a desirable effect in such areas. Thus, while the burden on EIP will be larger than usual, there is no reason why a larger than usual burden should fall on the special projects as would occur during cyclical fluctuations.

It would be more economically efficient, however, to utilize other methods to reduce unemployment in such areas, rather than relying primarily on EIP. At the beginning of Part III, the distinction between the factor proportions problem and the Keynesian problem was discussed. EIP is an efficient approach to the factor proportions problem; since there is excess supply of low-skilled labor, but shortages of other factors, what is needed is a shift in factor proportions. Under the Keynesian situation, all important factors are in excess supply; what is needed is an increase in demand.

Economically depressed areas need an increase in demand, as well as a shift in factor proportions. What is needed is a strategy of economic development, and stimulating demand for the region's output. This is of course a difficult problem, and cannot be pursued here. The point is that other methods for stimulating demand - direct grants to local governments for development projects, tax incentives to business for investment, and so on - should be the basic strategy, rather than primary reliance on EIP.

C. CAN THE GUARANTEE BE IMPLEMENTED WITHOUT EIP?

It has been argued throughout that primary reliance on regular producers, private and public, to provide most of the jobs is essential for an effective guarantee. Subsidy is required to induce these producers to create as many jobs as will be needed. In Part II, it was argued that the Employment Incentive Program is better designed than other types of subsidy programs to ac-

complish this. If the analysis in Part II is accepted, then EIP is the best method of including regular producers.

In Part II, however, it was stressed that the Employment Incentive Program must be proposed with reservations. Its feasibility depends on the ability to devise a workable maintenance of effort index. Unless such an index can be developed, any attempt to induce regular employers to employ more persons than they otherwise would relative to other inputs, will not succeed. Further research is needed before the feasibility of such an index can be appraised. Since EIP cannot yet be judged feasible, it becomes important to know whether the guarantee can be implemented without it.

The question can therefore be re-phrased: Can the guarantee be effectively implemented without relying on regular producers, through EIP, to create productive jobs? The answer is that a guarantee can formally be offered, but it will be highly inefficient, and make-work will be widespread. Special projects, that operate under the severe constraint that they must not undermine regular producers and their employees, can offer transitional work that is better than unemployment - not much more. In this limited role, they can perform a vital function.

If special projects are expected to bear the entire burden of the guarantee, then the productivity of projects will be even lower than usual, since diminishing returns, given this constraint, must be expected. The result will be the same if persons are placed with regular public employers, but under severe restrictions. This is the case in California's CWEP program. While it is administratively more convenient to place persons in regular public agencies, the restrictions prevent them from doing regular jobs. They are engaged in special, low productivity projects, though supervised by regular employers.

Even so, the guarantee without EIP is better than no guarantee. Whatever production is obtained is better than no output and unemployment, especially including the disutility to most household heads of the "leisure" of unemployment.

D. THE BENEFITS OF THE GUARANTEE

Even a guarantee without EIP will be more economically efficient than no guarantee, unless it is assumed that the leisure of unemployed household heads has significant positive value - an assumption rejected here. The guarantee will increase total national output by getting some output from persons who would have contributed nothing had they been unemployed.

A guarantee in which the main burden is assumed by regular producers - induced by subsidy via EIP - will be economically highly efficient.

As stated in the introduction, any guarantee will enable society to distinguish between heads who are genuinely willing to work, and those who are not; in contrast to the inability of the current welfare system to effectively do so. By assuring the public that able-bodied persons must work to receive income, and are ineligible for welfare, it may be possible to achieve higher welfare benefits for those who are unable to work.

An effective, productive guarantee, however, with primary reliance on regular producers, can be achieved only if a workable maintenance of effort index can be developed for the Employment Incentive Program, and if an Anti-Recession Program is enacted to control recession. If both of these are done, then the guarantee of a job opportunity - a long-time social goal - will become feasible.

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